



**S30-SERIES
LABELLING MACHINE
OPERATION AND
SERVICE MANUAL**

DESIGNED AND MANUFACTURED BY
TRONICS

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INTRODUCTION

TRONICS Labelling Machines are capable (dependent on configuration) of labelling square or rectangular bottles, boxes and cartons as well as round or slightly oval bottles. A typical labelling speed for 2 litre square bottles would be up to 180 bottles. The label accuracy within plus or minus 1.0 mm (not including variations due to products or labels) .

Speed, accuracy and reliability are achieved through the use of advanced technology incorporating stepping motors in house microprocessor development and ultra-reliable electronic components.

Adjustments during the normal course of operation are minimal and easily accomplished by operators.

OPERATING PRINCIPLE

The Labelling Machines manufactured by TRONICS combine precision mechanical and electronic design to apply self adhesive labels to the product as it passes the labelling head. The labelling of the product is initiated when the product sensor or an external signal indicates the passage of an object towards a Labelling Head on the machine.

The label position control is used to enter a delay distance of travel for the Product before the label drive motor begins to move. This enables very precise positioning of the label on the product.

After this distance delay the drive motor starts at a fixed base speed and accelerates at a fixed rate up to the labelling speed ; typically within the first 6.0 mm of Label Feed. The label separates from the backing paper web at the peel plate before being pressed onto the product. The drive motor continues to run and soon the label Gap Sensor sees the start of the next label. At this point, the motor will continue to run for the distance set in the FLAG SETTING then decelerate at a fixed rate before stopping; typically within 4.0 mm.

The drive motor that turns the rubberised drive roller is a high performance stepping motor. A stepping motor is an electric motor that can be controlled electronically to accelerate, decelerate, run at a specified speed and turn any number of turns or fraction of turns in fine increments or steps, hence its name of a stepping motor. When the motor is not running and is powered up, it locks in position. These

properties of a stepping motor make it ideal for labelling machine application as such a motor eliminates the accuracy problems, wear and tear etc., of brake/clutch drive systems and the brush wear problems of other motor types.

Stepping motors are extraordinarily reliable and are common in computer printers, disk drives, missile guidance systems and quartz watches with a sweep or stepping second hand. At slow speeds the actual stepping of the motor may be detectable. The motor may be stalled if the acceleration or load inertia is too great, in which case the motor may not turn and vibrate noisily, but will not suffer any harm.

INSTALLATION

Before moving the machine into the intended area, ensure that both power and air supply outlets with sufficient capacities are available within close proximity to the machine.

Machine specifications including power supply requirement are generally found on the back of the control box.

Once having carefully moved the machine into the desired position, ensure that it is level from side to side and front to back .

The majority of machines leave the factory fully assembled and tested. However, to reduce possibility of damage during transit and overall packaging dimensions, machines heading for overseas may include sub-assemblies partially dislocated and require re-positioning, depending on machine configuration. Therefore before proceeding, identify the incomplete sub-assemblies and corresponding parts. It should be a simple procedure to complete the assembly. If in doubt, please consult the factory.

Refer to Installation Instructions for more details. If in doubt, please consult the factory.

Regarding detached control units; The control box and post are unbolted and lie beside the machine with cables still connected. After bolting the assembly, carefully pull up any excess cable into the control box to prevent damage to protruding cable.

GENERAL SET-UP

Once an operator is experienced with the labeller, set-up and operation are very quick and simple.

The machine set-up can be divided into two major Areas:

Product Control
Label Control

Product Control

Product control is the Area that requires the most operator understanding. Simple mistakes like not adjusting guide rails properly or letting products enter the machine too close together can dramatically reduce labelling accuracy.

NOTE: To label flat products, the surface of the product needs to be uniformly flat on each side that is to be labeled. To label round cylindrical products, the diameter needs to be the same all the way along the product; otherwise the labels may crease when applied.

In summary, the Guide Rails, Label Head(s), and machine modules need to be set-up to produce the most reproducible presentation possible for the product(s) to the Label Head(s)
(See relevant Module Information)

Only after this has been achieved should the operator move onto the Label Control.

Label Head Control

The most important areas for Label Head Control involve setting of the Label Head Angle, the Peel Plate Position and the Peel Plate Brush.
(See "Standard Label Head" information).

Measuring Machine Accuracy

Often an operator can waste a lot of time in "chasing their tail" by labelling several bottles, looking at them and seeing an "accuracy problem".

The labelling machine is usually capable of labelling at an accuracy of +/- 1.0 mm not including variations due to the product or the label.

Labelling results will depend on contributions from all the areas of variation. Within the labelling machine's nominated performance Tronics has made allowances for electronics and mechanical sources of variation on the machine. The electronics variations can statistically add up to +/- 0.5 mm. This leaves mechanical variances to be contained within +/- 0.5 mm and highlights the importance of correct Product and Label Control settings.

Variations due to the Label are unusual but can be easily detected by measuring various details such as repetitiveness of label die cuts, variations in label "slitting" leading to height variations and other visual defects. Variations due to Product variation are more difficult to detect.

The ONLY way to practically measure the performance of the machine is to run the same set of products through the machine twice and measure the variation in label placement. Remember, a difference of 2.0 mm between label position on a Product represents an accuracy of +/- 1.0 mm about a mean "sensing" point on the product.

Because variation is a statistical phenomenon it is best to run say 50 products through the machine and determine how many of these products fall within a +/- 1.0 mm position variation. Product variation is often shown up by this test where labels appear to consistently shift on a given product. Such a shift will be caused by bottle variation such as: Height, Width, Length and Tilt.

Another Helpful Hint; Slow Speed Tests

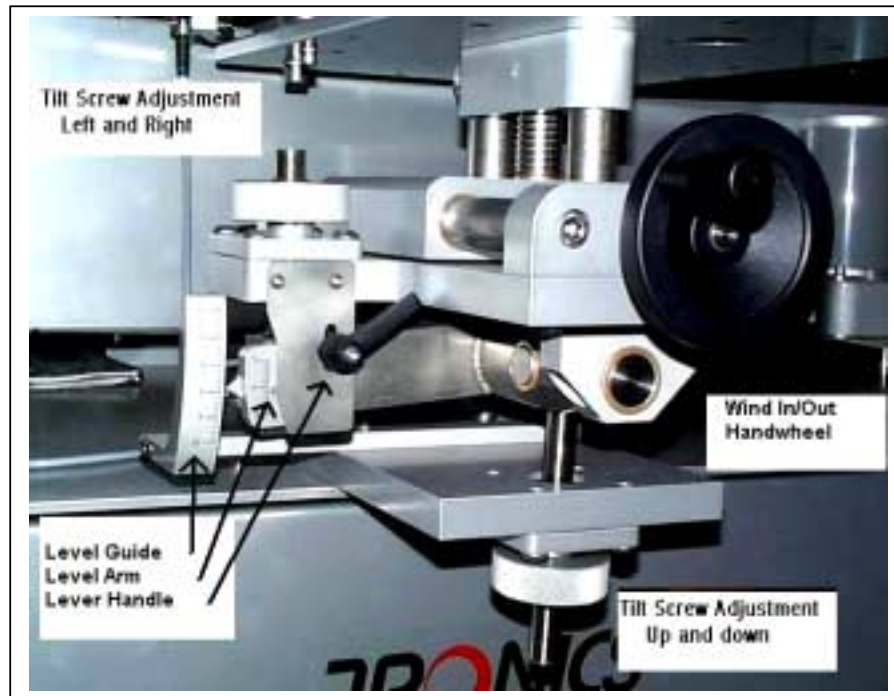
As most of the modules on the machine are speed matched the machine can be run at very slow speeds to aid machine set-up. These slow speeds often let the operator identify areas where the product is not controlled properly. Slow speed operation can also make it easy to stop the bottle next to a Label Head or a Machine Module for more accurate machine set-up.

Operating Principle

A Product Sensor or Start Signal is connected to the Label Head Control unit. When a product passes the Product Sensor, a label feed will be initiated. The Electronics will send a string of motor step pulses to the Stepping Motor Driver. This will result in the Drive Roller Assembly turning and pulling the Label Web. The Label Web is pulled from a roll of labels sitting on the Label Feed Spool. The Label Web tracks past Idler Rollers and around a Spring Loaded Dancing Arm. As the Dancing Arm approaches the end of its travel, it releases a Friction Brake that previously held the label roll stationary. The Label Web is fed through more Idler Rollers and past a Drag Brush to maintain tension in the Web after the Spring Loaded Dancing Arm. The Label Web passes through a Label Gap Sensor and proceeds around the sharp angle of a Peel Plate. The Adhesive Label separates (peels) from the Label Web at this sharp angle and is ejected in the direction of the Peel Plate. The remaining Web of the label continues around the edge of the Peel Plate, drawn through the Drive Roller Assembly and gathered by the winding motion of the Take-Up Spindle. The Take-Up spindle is driven by the Stepping Motor via a Fuse-It belt, which allows for drive slippage as the diameter of the Web Take-Up changes.

During the label feed a preceding label (to the one being ejected) passes through the Gap Sensor. When the trailing edge of this label is detected through the Gap Sensor, the Electronics will send a string of decelerating motor step pulses to the Stepping Motor Driver, bringing the Motor to a Stop. This completes the label feed and maintains registration for the next accurate label feed.

Mechanical Adjustments



SIDE MOUNTED LABEL HEAD

Base Plate Angle Adjustment

Toward the Product Conveyor

The angle of the base plate may be altered using the fine angle adjust turnbuckle towards or away from the product conveyor. Normally the angle of the base plate is set so that it is parallel to the product conveyor and all vertical components on the base plate are perpendicular to the plane of the product conveyor. If a tapered product is being labelled then the edge of the peel plate should be parallel to the side of the product.

Care must be taken not to damage the peel plate when using this adjustment by insuring all potential obstructions are clear (such as the Product Conveyor or an Overhead Stabilising Conveyor etc..).

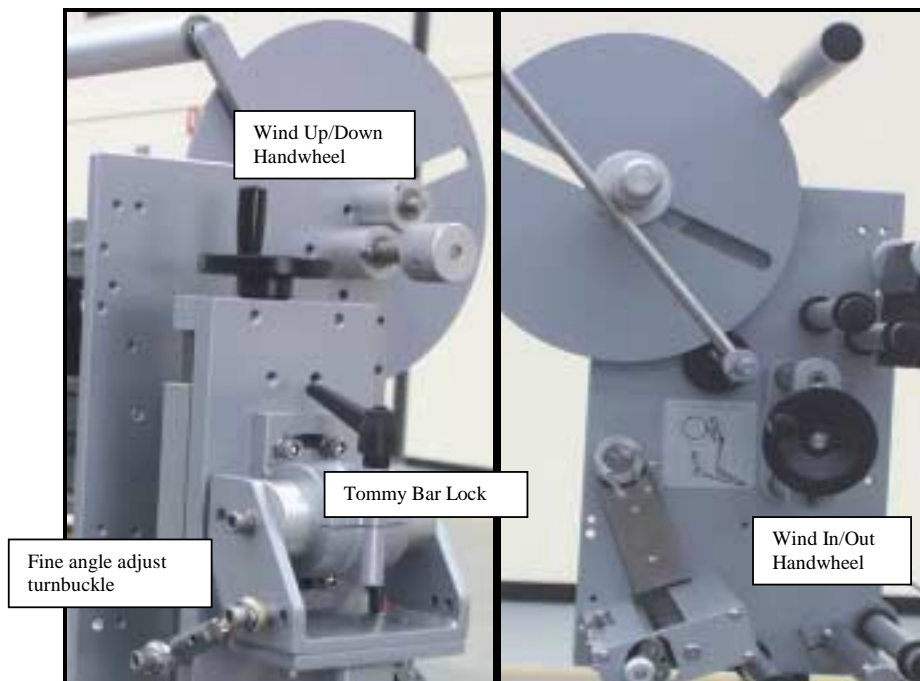
Along the Product Conveyor

The angle of the base plate may be altered by loosening the Tommy Bar Lock that locks the angle adjustment. Then tilt the base plate using the fine angle adjust turnbuckle toward the beginning or end of the product conveyor and re-tighten the lock. Use the reference provided to align the head.

The angle of the label head along the direction of the Product Conveyor needs only to be adjusted as a matter of installation and maintenance. As a rule, the correct angle is to have the edge of the base plate nearest the Product Conveyor parallel to the surface of the product Conveyor (the exception may occur when labelling tapered round containers).

Care must be taken not to damage the peel plate when using this adjustment by insuring all potential obstructions are clear (such as the Product Conveyor or an Overhead Stabilising Conveyor etc..).

For an Overhead mounted Label Head, the Base Plate is set so that it is perpendicular to the Main conveyor.



OVERHEAD MOUNTED LABEL HEAD -FRONT AND BACK VIEW

Vertical (height) Position of the Label Head

Perhaps one of the most straight forward adjustments is to alter the height of the label on the Product. Using the Hand-wheel the height of the label head can be adjusted to suit. Note the angle adjustments as described above will alter the height of the peel plate (the point where the labels are ejected), so this vertical height adjustment should be made after all angle adjustments have been made.

Care must be taken not to damage the peel plate when using this adjustment by insuring all potential obstructions are clear (such as the Product Conveyor or an Overhead Stabilising Conveyor etc..).

Horizontal (width) Position of the Label Head

Also, one of the most straight forward adjustments is to alter the Horizontal position of the peel Plate with respect to the passing Product. Using the Hand-wheel the "width position" of the label head can be adjusted to suit. Again Note, the angle adjustments as described above will alter the width of the peel plate this Horizontal width adjustment should be made after all angle adjustments have been made.

Care must be taken not to damage the peel plate when using this adjustment by insuring all potential obstructions are clear (such as the Product Conveyor or an Overhead Stabilising Conveyor etc.). As a guide the edge of the peel plate should be set to a width that just allows the widest part of the bottle to pass without actually touching the peel plate. The optimum clearance is less than 2.0 mm.

Label Feed Spool Assembly

The label feed spool is normally a 335 mm. diameter disk on which the roll of labels is placed. The spool is free to run when the label web pulls the spring loaded dancer arm away from its home (or furthest back position) and is locked when the dancer arm is in its home position. The feed spool normally takes a roll of labels with a 38 mm. core but a 76 mm. core insert adapter is also provided.

The tension in the label web may be altered by adjusting the spring tension on the dancer arm. This is done by loosening the grub screw in the knurled spring retainer under the dancer arm and turning the knurled spring retainer to increase or decrease the spring tension, the grub screw(s) are then re-tightened.

The tension applied to the web should be sufficient to cause the feed spool to run under tension from the dancer arm at a speed which allows the labels to be drawn from the loop in the web around the dancer arm and not directly from the label feed spool. On the other hand the tension should not be too great to cause too much drag on the drive motor.

Label Web Tensioning

As well as being controlled by the dancer arm of the label feed spool assembly, the tension of the label web is also maintained by a Drag Brush. The Drag Brush is pressed gently against the web of labels on the appropriate roller with light but sufficient pressure to prevent over-run and/or sagging of the web between it and the drive roller.

It is very important to set the brush for accurate label registration through the gap sensor.

Idler Rollers

The idler rollers are made from aluminium with bearings, most have adjustable label web guide rings on them. The web guide rings may be slid up and down to help ensure the web tracks as desired

Peel Plate

The peel plate is manufactured from a Delrin wedge. The label web goes around a small radius at the end of the peel plate and it is at this point that the labels separate from the backing paper.

If the radius at the end of the peel plate is too small or it has a sharp edge then too much drag is exerted on the label web and the drive motor may stall, conversely if the radius is too large then the labels may not separate properly from the backing paper. Poorly die-cut labels or labels with faulty adhesive can tempt the user to look for fault in the peel plate rather than the labels.

The peel plate is fastened by several small countersink allen-bolts into a square section aluminium bracket. This bracket is in turn supported at its top and its base by two circular bars (peel plate "arms"). The other end of the circular bars pass through two milled holes in a larger vertically mounted round post. The Post is mounted to the base plate of the Label Head via an Allan-Bolt that passes, from beneath the base plate, up through a drilled hole in the base plate and into a tapped hole at the base of the circular post.

Change Peel Plates

The Peel Plate may need to be changed to suit different height containers. A typical case would be when there is a small recess in the product, where the label is to be placed. Another case is where a narrow bottle requires smaller peel plates that can protrude underneath the sides of an Overhead Stabilising Conveyor.

Peel Plate Arms

The Peel Plate arms should rarely be adjusted. These arms pass into a support post and are each fastened by two set screws. Care must be taken to insure these set screws are always tightened and that there is even tension on the label web at the peel plate after these arms are adjustment. **Uneven tension will result in the label web tracking up or down.** Occasionally the Length of these arms needs to be adjusted to allow for the optimum angle peel plate being in close

proximity to the Bottle Labelling Surface or next to other machine modules.

Peel Plate Support Post

The Angle of the Peel Plate can be altered by loosening the support bolt underneath this post. This angle is rarely adjusted but may need adjustment to allow for the optimum angle peel plate being in close proximity to the Bottle Labelling Surface or next to other machine modules. The ideal setting should see the inner face of the peel plate (face closest the Product) run parallel with the Main Conveyor. If this can not be set then a setting for the inner face running as close to parallel as possible should be aimed for.

Peel Plate Brush

This brush is usually located at the end of a support arm that allows the brush to apply pressure to the label as it is wiped onto the product (not used for round bottle applications). Setting this brush is a critical adjustment. Uneven pressure from this brush can result in label creasing or label inaccuracy. Often referred to as “pressure sensitive” labels it is the pressure from this brush that applies the force necessary for the label to adhere to the product.

In some cases these brushes may be replaced by foam rollers or felt covered spring steel wipers.

Threading

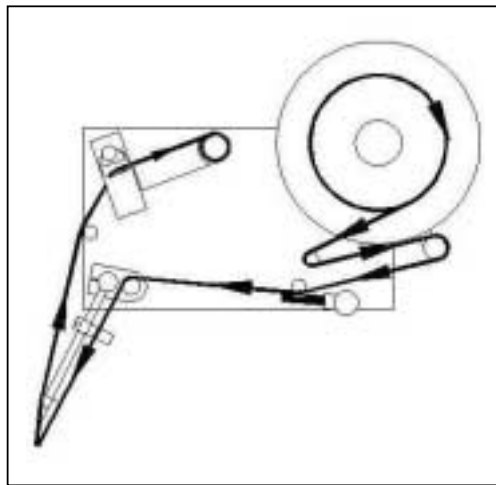
Threading of the labeller is straight-forward and easily learned by operators. Operators can, with a little practice, splice the start of a new roll of labels to the tail or end of the last roll and thereby minimise down-time.

- (1) Turn the label head "POWER" switch off.
- (2) Gently squeeze the top of the spindle "fingers" and pull off any used backing paper.
- (3) Remove any core from the label feed spool and place a new roll of labels on the feed spool with the labels coming off in the direction they are to go around the peel plate.
- (4) Thread the labels according to the appropriate threading diagram, finally securing them with a manual twist of the take up spindle.

It is often desirable to remove the labels from the web after the peel plate. This prevents labels coming off the web as it goes around the drive roller and sticking to the rollers in the drive roller assembly. Use the ratchet handle lever to release the pressure rollers. This enables easy label threading between the Pressure rollers and the Drive roller.

Do not forget to re-engage the pressure rollers.

Care should be taken to ensure that the labels are threaded correctly through the drive roller assembly (see threading diagram) and that the pressure rollers are pressing tightly against the labels on the drive roller. Failure to do this properly can cause label position errors in critical labelling application and failure of the labels to drive.



RHS Label Head : Threading Diagram

Label Gap Sensor

The function of the label gap sensor is, as the name implies, to sense the gap between the labels as the web is running. It operates by sensing light (or infra-red) passing through the backing paper at the gap but not through the backing paper plus the label.

To setup the sensor, use a small screw driver. First set the sensitivity control to maximum (fully clockwise). The yellow light should come on). Then place the label (with backing paper) in the sensor and check that the red light comes on. If the red light does not come on, reduce the sensitivity until it does come on. Finally, remove a label from a length of labels and place the bare section of backing paper in the sensor (do not have labels threaded through the drive roller). Check that the yellow light is on again.

When the sensitivity is set properly labels should be able to be passed quickly through the gap sensor with the indicator light flashing. The backing paper may vary between rolls and types of labels but it is generally possible to set the sensitivity of the gap sensor so that it will handle these variations and after a little initial adjusting of the sensitivity should rarely need further adjustment.

A good test is to jiggle just the backing paper in and out of the gap sensor slot to see that the sensor light does not change from indicating the "Gap status". Then place the label and backing paper in the slot and jiggle to see that the sensor light does not change from indicating the "Label status".

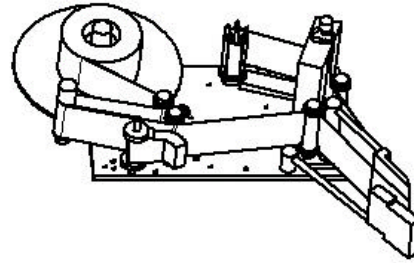
The Gap sensor will be factory preset. However, if further adjustment is required, please refer to the Sensor Operating instructions at the back of this Manual.

Maintenance

The drive roller should be kept clean, using mineral turpentine if necessary to remove adhesive build up. Sometimes if the cleanliness of the drive roller is neglected it may become slippery and the labels will not be driven consistently, resulting in the label position on the product varying. It is important to keep the end of the peel plate clean and free of adhesive build up from the label web (mineral turpentine - turps- is about the best, most readily available solvent).

LHS LABEL HEAD (Module B)

The Label Head supports the Label Spool and facilitates application of labels to the products. The Label Head is stepper motor driven and electronically synchronised to the main conveyor.



It comprises of a Base Plate Fitted with Drag and Wipe Down Brush assemblies, Drive Roller Assembly, Gap Sensor, Idler Rollers, Ring Guides, Label Feed Spool, Peel Plate Assembly, Spring Loaded Dancing arm, Support Posts, and a Take up Spindle.

The Labelling Head comes on a wind In/Out and wind Up/Down arrangement fitted with a Fine Tilt Angle Adjustment.

Side or overhead mounting is available with three standard heights and various options available. The standard Label Head will cater for label web widths up to 215mm tall and is side mounted (A2). Depending on the model selected, Label Head code is:

Type	Code
115 – Side Mounted	B1
215 – Side Mounted	B2
265 – Side Mounted	B3
115 – Overhead Mounted	Bo1
215 – Overhead Mounted	Bo2
265 – Overhead Mounted	Bo3
Other/Special	BX
Options	Code
Clear Gap Sensor	a
UV Gap Sensor	b
Digital Position Indicator	c
Low Level Roll Detection	d
Missing Label Detection (on Label Roll)	e
MLD – Extra Gap Sensor	f
MLD – Extra Clear Gap Sensor	g
MLD – Extra UV Gap Sensor	h
Hot Foil Coder (including. bracket)	k
Hot Foil Coder (special)	kx
Hot Foil Coder mount bracket	m
High Speed Head Upgrade	n

Power Take-up Upgrade	p
Touch Panel Control (TSA upgrade only)	q
Other/Special	x

Example Code: B1ad [Module Options]

215mm tall LHS Label Head with Clear Gap Sensor and Low Level Roll Detection.

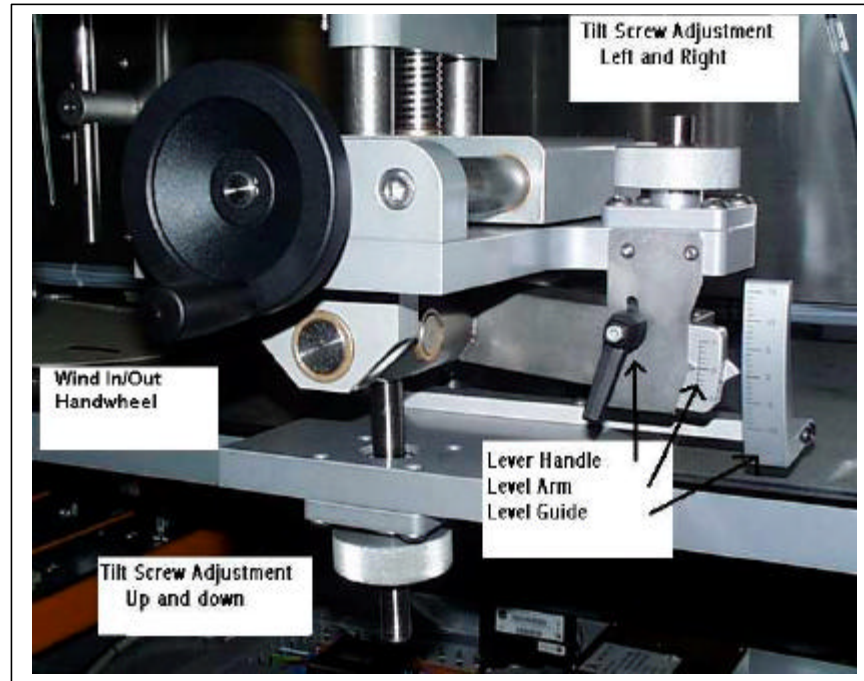
Operating Principle

A Product Sensor or Start Signal is connected to the Label Head Control unit. When a product passes the Product Sensor, a label feed will be initiated. The Electronics will send a string of motor step pulses to the BLD-03 Stepping Motor Driver. This will result in the Drive Roller Assembly turning and pulling the Label Web. The Label Web is pulled from a roll of labels sitting on the Label Feed Spool. The Label Web tracks past Idler Rollers and around a Spring Loaded Dancing Arm. As the Dancing Arm approaches the end of its travel, it releases a Friction Break that previously held the label roll stationary. The Label Web is fed through more Idler Rollers and past a Drag Brush to maintain tension in the Web after the Spring Loaded Dancing Arm. The Label Web passes through a Label Gap Sensor and proceeds around the sharp angle of a Peel Plate. The Adhesive Label separates (peels) from the Label Web at this sharp angle and is ejected in the direction of the Peel Plate. The remaining Web of the label continues around the edge of the Peel Plate, drawn through the Drive Roller Assembly and gathered by the winding motion of the Take-Up Spindle

The Take-Up spindle is driven by the Stepping Motor via a Fuse-It belt, which allows for drive slippage as the diameter of the Web Take-Up changes.

During the label feed a preceding label (to the one being ejected) passes through the Gap Sensor. When the trailing edge of this label is detected through the Gap Sensor, the Electronics will send a string of decelerating motor step pulses to the BLD-03 Stepping Motor Driver, bringing the Motor to a Stop. This completes the label feed and maintains registration for the next accurate label feed.

Mechanical Adjustments



Base Plate Angle Adjustment

Toward the Product Conveyor

The angle of the base plate may be altered using the fine angle adjust turnbuckle towards or away from the product conveyor. This may be useful if tapered or conical bottles are being labelled. Normally the angle of the base plate is set so that it is parallel to the product conveyor and all vertical components on the base plate are perpendicular to the plane of the product conveyor. If a tapered product is being labelled then the edge of the peel plate should be parallel to the side of the product.

Care must be taken not to damage the peel plate when using this adjustment by insuring all potential obstructions are clear (such as the Product Conveyor or an Overhead Stabilising Conveyor etc..).

Along the Product Conveyor

The angle of the base plate may be altered by loosening the Tommy Bar Lock that locks the angle adjustment. Then tilt the base plate using the fine angle adjust turnbuckle toward the beginning or end of the product conveyor and re-tightening the lock. Use the reference provided to align the head. **The angle of the label head along the direction of the Product Conveyor need only be adjusted as a**

matter of installation and maintenance. As a rule, the correct angle is to have the edge of the base plate nearest the Product Conveyor parallel to the surface of the product Conveyor (the exception may occur when labelling tapered round containers).

Care must be taken not to damage the peel plate when using this adjustment by insuring all potential obstructions are clear (such as the Product Conveyor or an Overhead Stabilising Conveyor etc..).

Vertical (height) Position of the Label Head

Perhaps one of the most straight forward adjustments is to alter the height of the label on the Product. Using the Hand-wheel the height of the label head can be adjusted to suit. Note the angle adjustments as described above will alter the height of the peel plate (the point where the labels are ejected), so this vertical height adjustment should be made after all angle adjustments have been made.

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Also, one of the most straight forward adjustments is to alter the Horizontal position of the peel Plate with respect to the passing Product. Using the Hand-wheel the "width position" of the label head can be adjusted to suit. Again Note, the angle adjustments as described above will alter the width of the peel plate this Horizontal width adjustment should be made after all angle adjustments have been made.

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The label feed spool is normally a 335 mm. diameter disk on which the roll of labels is placed. The spool is free to run when the label web pulls the spring loaded dancer arm away from its home (or furthest back position) and is locked when the dancer arm is in its home position. The feed spool normally takes a roll of labels with a 38 mm. core but a 76 mm. core insert adapter is also provided.

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It is very important to set the brush for accurate label registration through the gap sensor.

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The peel plate is fastened by several small countersink allen-bolts into a square section aluminium bracket. This bracket is in turn supported at its top and its base by two circular bars (peel plate "arms"). The other end of the circular bars pass through two milled holes in a larger vertically mounted round post. The Post is mounted

to the base plate of the Label Head via an Allan-Bolt that passes, from beneath the base plate, up through a drilled hole in the base plate and into a tapped hole at the base of the circular post.

Change Peel Plates

The Peel Plate may need to be changed to suit different height containers. A typical case would be when there is a small recess in the product, where the label is to be placed. Another case is where a narrow bottle requires smaller peel plates that can protrude underneath the sides of an Overhead Stabilising Conveyor.

Peel Plate Arms

The Peel Plate arms should rarely be adjusted. These arms pass into a support post and are each fastened by two set screws. Care must be taken to insure these set screws are always tightened and that there is even tension on the label web at the peel plate after these arms are adjustment. **Uneven tension will result in the label web tracking up or down.** Occasionally the Length of these arms needs to be adjusted to allow for the optimum angle peel plate being in close proximity to the Bottle Labelling Surface or next to other machine modules.

Peel Plate Support Post

The Angle of the Peel Plate can be altered by loosening the support bolt underneath this post. This angle is rarely adjusted but may need adjustment to allow for the optimum angle peel plate being in close proximity to the Bottle Labelling Surface or next to other machine modules. The ideal setting should see the inner face of the peel plate (face closest the Product) run parallel with the Main Conveyor. If this can not be set then a setting for the inner face running as close to parallel as possible should be aimed for.

Peel Plate Brush

This brush is usually located at the end of a support arm that allows the brush to apply pressure to the label as it is wiped onto the product (not used for round bottle applications). Setting this brush is a critical adjustment. Uneven pressure from this brush can result in label creasing or label inaccuracy. Often referred to as “pressure sensitive” labels it is the pressure from this brush that applies the force necessary for the label to adhere to the product.

In some cases these brushes may be replaced by foam rollers or felt covered spring steel wipers.

Threading

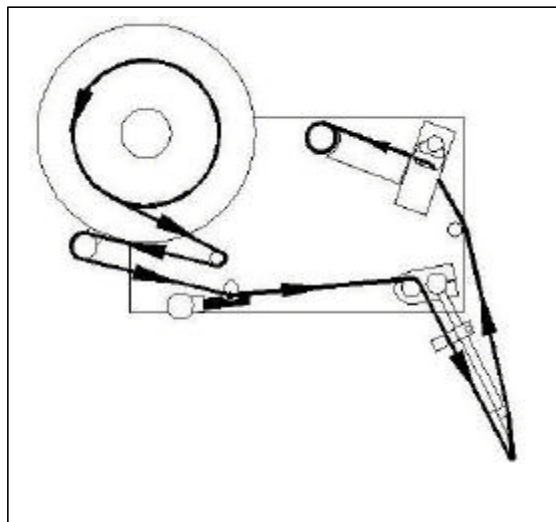
Threading of the labeller is straight-forward and easily learned by operators. Operators can, with a little practice, splice the start of a new roll of labels to the tail or end of the last roll and thereby minimise down-time.

- (1) Turn the label head "POWER" switch off.
- (2) Gently squeeze the top of the spindle "fingers" and pull off any used backing paper.
- (3) Remove any core from the label feed spool and place a new roll of labels on the feed spool with the labels coming off in the direction they are to go around the peel plate.
- (4) Thread the labels according to the appropriate threading diagram, finally securing them with a manual twist of the take up spindle.

It is often desirable to remove the labels from the web after the peel plate. This prevents labels coming off the web as it goes around the drive roller and sticking to the rollers in the drive roller assembly. Use the ratchet handle lever to release the pressure rollers. This enables easy label threading between the Pressure rollers and the Drive roller.

Do not forget to re-engage the pressure rollers.

Care should be taken to ensure that the labels are threaded correctly through the drive roller assembly (see threading diagram) and that the pressure rollers are pressing tightly against the labels on the drive roller. Failure to do this properly can cause label position errors in critical labelling application and failure of the labels to drive.



LHS Label Head : Threading Diagram

Label Gap Sensor

The function of the label gap sensor is, as the name implies, to sense the gap between the labels as the web is running. It operates by sensing light (or infra-red) passing through the backing paper at the gap but not through the backing paper plus the label.

To setup the sensor, use a small screw driver. First set the sensitivity control to maximum (fully clockwise). The yellow light should come on). Then place the label (with backing paper) in the sensor and check that the red light comes on. If the red light does not come on, reduce the sensitivity until it does come on. Finally, remove a label from a length of labels and place the bare section of backing paper in the sensor (do not have labels threaded through the drive roller). Check that the yellow light is on again.

When the sensitivity is set properly labels should be able to be passed quickly through the gap sensor with the indicator light flashing. The backing paper may vary between rolls and types of labels but it is generally possible to set the sensitivity of the gap sensor so that it will handle these variations and after a little initial adjusting of the sensitivity should rarely need further adjustment.

A good test is to jiggle just the backing paper in and out of the gap sensor slot to see that the sensor light does not change from indicating the "Gap status". Then place the label and backing paper in the slot and jiggle to see that the sensor light does not change from indicating the "Label status".

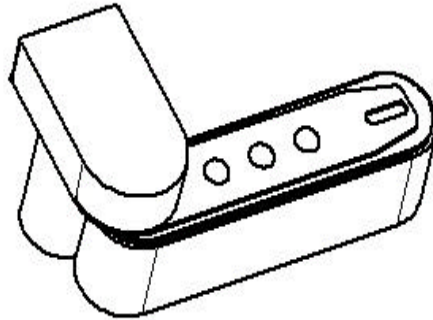
The Gap sensor will be factory preset. However, if further adjustment is required, please refer to the Sensor Operating instructions at the back of this Manual.

Maintenance

The drive roller should be kept clean, using mineral turpentine if necessary to remove adhesive build up. Sometimes if the cleanliness of the drive roller is neglected it may become slippery and the labels will not be driven consistently, resulting in the label position on the product varying. It is important to keep the end of the peel plate clean and free of adhesive build up from the label web (mineral turpentine - turps- is about the best, most readily available solvent).

WRAP CONVEYOR (Module C)

A Wrap Conveyor is used to label round products whereby the product needs to spin about its centre to apply the label. The Wrap Conveyor is stepper motor driven and electronically synchronised to the main conveyor.



The Wrap Conveyor comes on a wind Up/Down arrangement for variable height application.

Side or overhead mounting available with two standard heights and various options are available. The standard Wrap Conveyor is 100mm tall and side mounted with backing plate (C1). Depending on the model selected, the Wrap Conveyor code is:

Type	Code
100mm - Side Mounted RHS	C1
150mm - Side Mounted RHS	C2
100mm - Side Mounted LHS	C3
150mm - Side Mounted LHS	C4
100mm - Overhead Mounted RHS	Co1
150mm - Overhead Mounted RHS	Co2
100mm - Overhead Mounted LHS	Co3
150mm - Overhead Mounted LHS	Co4
Other/Special	CX

Options	Code
Digital Position Indicator X1	a
Digital Position Indicator X2	b
Digital Position Indicator X3	c
Replace with Food Grade Belt	d
Replace with other Belt	e
High Speed motor/driver	f
Wind in/up (side with backing plate)	g
Wind in/up (side no backing plate)	h
Other/Special	x

Example Code: C1ad [Module Options]

100mm tall RHS Wrap Conveyor with a 90mm tall Food Grade Belt and Digital Position Indicator.

Operating Principle

It is common in these applications to have the Wrap Conveyor travelling at twice the speed of the Product Conveyor. The reason for this is that under these conditions the centre of a round product travels at exactly the same speed as the Product Conveyor whilst the surface of the container is travelling twice as fast as the product conveyor. Consequently the label web is travelling twice as fast as the Product Conveyor. This relationship is automatically set in the Main Touch Panel Controls, but can be manually changed.

Setup

The backing pad should be adjusted such that containers are held firmly between the Wrap Conveyor and backing pad. Insufficient spacing will prevent containers from entering the unit. On the other hand, too large a separation will prevent proper contact resulting in poorly labelled products. The height of both the Wrap Conveyor and backing pad should be adjusted to support the product (without tilting) and to overlap the desired application height.

Setting up a Wrap Conveyor unit may initially require some patience and special attention given to the following remarks:

- The peel plate must be positioned quit close to the Wrap Conveyor entrance.
- If the product or label is on an angle, the label will spiral on the product. The container surface must be vertical to the base to avoid spiralling.
- Label timing is of crucial importance. The label must contact the product surface at the same speed. If the label contacts the product early, it will buckle or crease. If the label contacts the product late, it will be pulled off the web causing improper registration and subsequent accuracy problems.

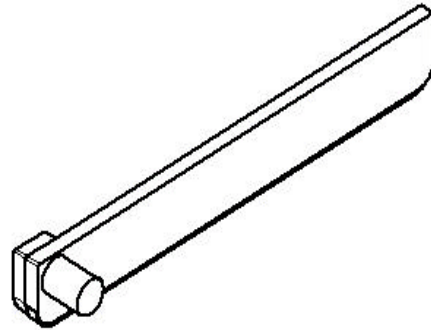
Before attempting to label you should be able to set the Wrap Conveyor to run a product through such that:

- It enters smoothly into the Wrap Conveyor,
- The product starts to spin once it enters the Wrap Conveyor and
- The product does not tilt while in the Wrap Conveyor.

STABILISING CONVEYOR (Module D)

The Stabilising Conveyor holds the product during labelling and maintains a consistent product alignment.

For stabilising of Products that are not allowed to have anything contact their opening prior to filling, this module can be supplied with side mounting for stabilising of Products from the side.



When mounted from above, this "clamps" the product to the Main Conveyor for its travel past the Labelling station(s). The Stabilising Conveyor is stepper motor driven and electronically synchronised to the main conveyor and comes with wind Up/Down adjustment for variable height application. The Rubber Conveyor Belt runs over a plastic runner that is spring loaded to allow for small product height variations.

Side or overhead mountings are available with two standard lengths. There is also the option of fitting a Digital Position Indicator. The standard Stabilising Conveyor is 1.5m long and overhead mounted (D1). Depending on the model selected, the Stabilising Conveyor code is:

Type	Code
1.5m - Overhead LHS Mounted	D1
1.5m - Overhead RHS Mounted	D2
0.5m - Side Mounted LHS	Ds1
0.5m - Side Mounted RHS	Ds2
Other/Special	DX

Options	Code
Digital Position Indicator	a
Other/Special	x

Example Code: D1a [Module Options]

1.5m long LHS Stabilising Conveyor with Digital Position Indicator.

Operating Principle

Owing to the requirement of the Stabilising Conveyor to exert a certain amount of pressure to maintain product stability during labelling, the throughput rate is limited by a minimum product spacing. As a guide it is recommended that pressure points on the Stabilising Conveyor from the products be no closer than 200.00 mm.

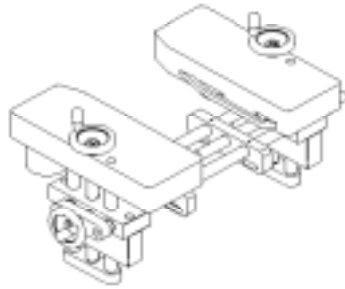
Setup

Before attempting to label you should be able to set the Overhead Conveyor to run a product through such that:

- It enters smoothly under the Stabilising Conveyor Belt.
- The product is firmly held without being distorted from the pressure exerted by the Stabilising Conveyor.
- The base of the product remains flat and in full contact with the surface of the product conveyor, while under the Stabilising Conveyor.
- The Products are spaced to a minimum spacing as mentioned earlier.

CAUTION: The Stabilising Conveyor can have sensors and reflectors mounted along its length. When adjusting the position of the Stabilising Conveyor, care must be taken to insure that sensors and indeed the label Head are not being knocked or damaged. The operator has considerable mechanical advantage from the adjustment ACME thread and significant machine damage can be done without due care from the operator.

ALIGNER CHAINS (Module K)



Aligner Chains are used to consistently align products with an oval cross section. The Chains are stepper motor driven and electronically synchronised to the main conveyor.

Operating Principle

Aligner Chains are spring loaded to meet at the centre of the main conveyor. Once the Chains orientate the product, the Stabilising Conveyor ensures the product orientation for the duration of the labeling process. This ensures that when labeling oval products the best possible labeling accuracy and position is obtained. It is common practice to have the Aligner Chains traveling at the same speed as the Product Conveyor. This relationship can be automatically set on the Main Touch Panel Controls.

Type	Code
Aligner Chains	K
Other/Special Requirements	KX

Example Code: K [Module Options]
Standard Aligner Chains

Setup

The main adjustment that is required for the Aligner Chains involves setting the centre Gap adjustment. If this Gap is too narrow it can prevent the product from passing down the main conveyor. The Aligners should be set so that there is a large enough gap for the product to enter between the chains. This adjustment is made using the Wind In/Out Hand wheels near the bottom of each side. As a guide, the gap should be large enough for the leading edge of the product to pass into the Aligner Chains. The height of the chains can be adjusted using the Wind Up/Down Hand wheels located at the top, on either side.

Before attempting to label you should be able to set the Aligner Chains to run a product through such that:

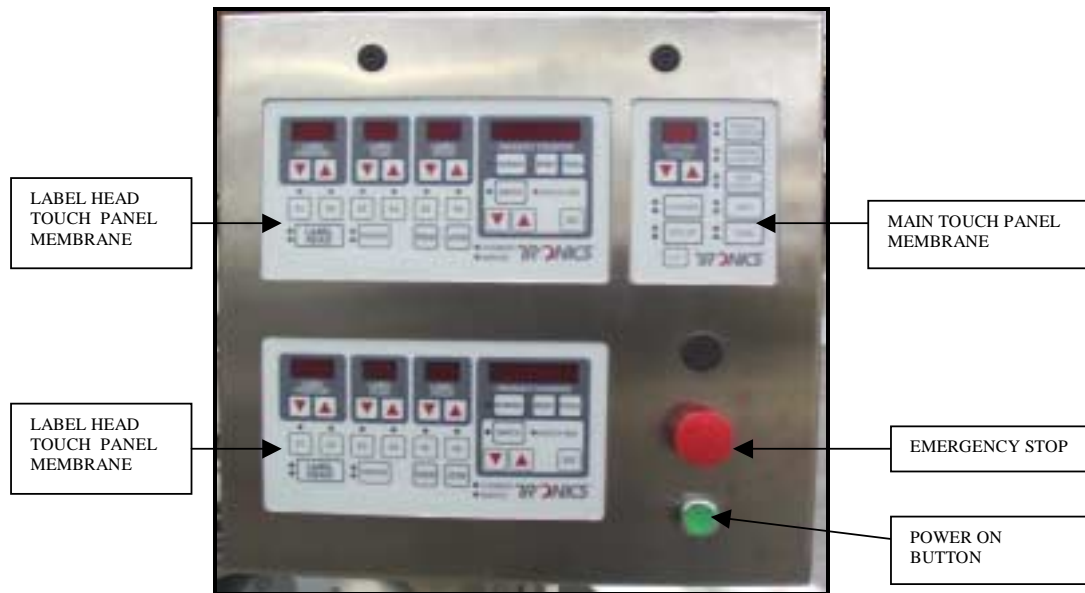
- It enters smoothly between the Aligners (no rocking on its base)
- The product is presented as consistently as possible using the guide rails. They should be set as close to one another as possible
- The base of the product remains flat and in full contact with the surface of the product conveyor, as it passes through the Aligners



CONTROLS INTRODUCTION

The Control Box provides machine controls with the number of controls varying depending on machine configuration and modules.

Typical Controls shown below are for a labeling machine fitted with two Label Heads.



Main Touch Panel

This membrane switch provides overall machine control. This includes Power, Speed and where applicable Speed Ratio of all the modules fitted to the machine.

The speed of all modules is synchronised with the main conveyor and any speed changes are automatically reflected in the modules.

The best speed setting for the machine is the slowest possible setting with the optimum product spacing to achieve the desired machine throughput.

Label Head Touch Panel

This membrane switch controls specific features on the Labelling Head. This includes label position on the product; label web stopping position and several modes related timing functions.

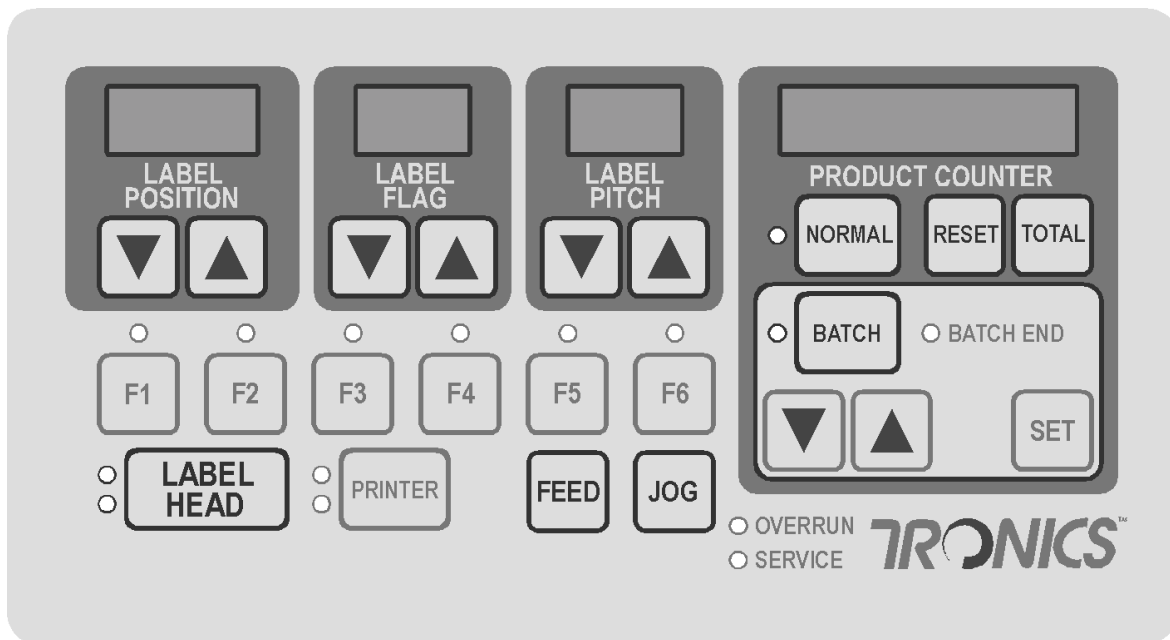
LABELLER CONTROL PANEL MANUAL

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LABEL HEAD CONTROL PANEL



LABEL HEAD POWER

Pressing the LABEL HEAD button causes the Label Head to toggle between off and on, as indicated by the red and green lights next to the button. When the head is off, all other lights and numerical displays will blank out. Note that the state of the Label Head power changes *when the button is released*. If the button is pressed continuously for 2 seconds with the power on, the Label Speed Ratio (explained later) is displayed.



PRINTER POWER

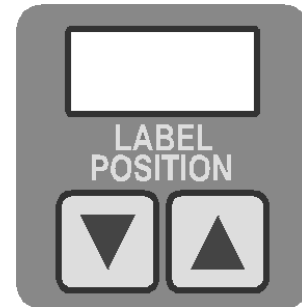
This button is used only if a label printing device such as a Hot Foil Coder or Thermal Printer is attached to the Label Head. Pressing the



PRINTER button causes the Printer to toggle between off and on, as indicated by the red and green lights next to the button. If Printer is not attached to the Label Head, neither light will be on and pressing the button will have no effect. Note that the state of the Printer power changes *when the button is released*. If the button is pressed continuously for 2 seconds, the Printer Time (explained later) is displayed.

LABEL POSITION

This setting is used to adjust the position of the label on the product in the direction of label travel. The number represents a delay in millimetres that the product conveyor will travel between a product being detected and a label for that product being fed. The label position can range from 0.0 to 999.5 in increments of 0.5 mm. (Note that a small, extra delay is added automatically for matching of label position over the speed range of the machine.)

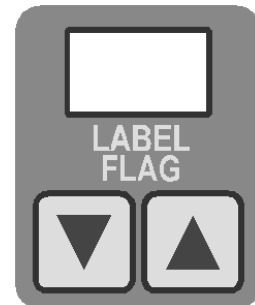


ADJUSTMENT PROCEDURE

The Label Position can be decreased and increased using the up and down buttons under the display. When increased through 999.5, the position will 'wrap around' to 0.0. Likewise, if it is decreased through 0.0, it will 'wrap around' to 999.5. A single button press will advance the number by 1 increment in the desired direction. If the button is pressed and held, the number will advance continuously, initially at a slower pace then at a faster pace after a few increments.

LABEL FLAG

This setting is used to adjust the stopping position of the next label after a label feed. The number normally displayed in this section of the panel gives an indication of the distance in millimetres through which the label web will travel after a leading label edge has been detected by the gap sensor. In the case of clear labels, it is the distance in millimetres through which the label web will travel after an opaque part of the label has been detected by the gap sensor, after the label pitch setting has been exceeded. This is explained further in the next section.

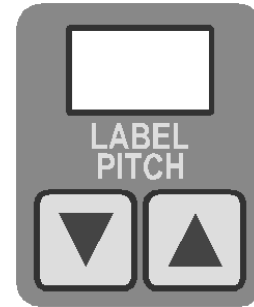


ADJUSTMENT PROCEDURE

The label flag can be decreased and increased using the up and down buttons under the display. When increased through 999, the position will 'wrap around' to 0. Likewise, if it is decreased through 0, it will 'wrap around' to 999. A single button press will advance the number by 1 increment in the desired direction. If the button is pressed and held, the number will advance continuously. Initially this will be at a slower pace, then at a faster pace after a few increments.

LABEL PITCH

This setting is used to enable labels with a clear background to be used with a regular Tronics optical Label Sensor. Where a label has multiple clear and opaque regions passing through the Label Sensor, the sensor would ordinarily interpret each of these as a label edge. This would cause the web to stop multiple times for each label. The Label Pitch setting can be used to mask all but one of these regions to prevent this.



CORRECT SETTING

Correct use of this feature involves setting a value no more than the distance between the leading edges of the labels (mm), or between any point on one label and the same point on the next label. If this distance varies from label to label, the setting should be no more than the shortest such distance measured. **When not using clear labels, the Label Pitch should be set to zero.**

LABEL OVERRUN

If the label web travels 1000 mm (with the Label Pitch set to zero) without the Label Sensor detecting an edge, the label web is halted and a OVERRUN light appears. This is to reduce label wastage through incorrect adjustment of the Label Sensor or a break of the label web.

ADJUSTMENT PROCEDURE

The Label Pitch can be decreased and increased using the up and down buttons under the display. When increased through 999, the position will 'wrap around' to 0. Likewise, if it is decreased through 0, it will 'wrap around' to 999. A single button press will advance the number by 1 increment in the desired direction. If the button is pressed and held, the number will advance continuously, initially at a slower pace then at a faster pace after a few increments.

SETUP PROCEDURE

To setup a clear background label using the Label Pitch facility, it is recommended that the following procedure is followed:

1. Set the Label Flag to zero.
2. Set the Label Pitch to the distance from the edge of one label to the same edge of the next.
3. Jog the label until a large clear part of the label is located in the centre of the Label Sensor.
4. Press FEED and note the stopping position of the label. The label will stop about 4mm after the Label Sensor is blocked by an opaque area of the label.
5. Press FEED several more times and check that the label is stopping consistently. If the label is gradually creeping forward then the Label Pitch setting may be too high. If it is gradually creeping backward then the Label Pitch setting may be too low. If its stopping position is inconsistent then the Label Sensor sensitivity may need adjusting. Note that the most suitable area of label for the Label Sensor to

register off is one that is strongly opaque, has a near to vertical edge and has a large area of clear label just before it.

6. Once consistent feeding is obtained, the Label Flag can be set as required.

PRODUCT COUNTER

This section of the Control Panel has the following features:

- A resettable counter that displays the total number of labels applied to a product.
- A non-resettable counter that displays the total number of labels applied to a product.
- A display of the current labeling rate in products per minute.
- A facility to activate an alarm after a pre-determined number of products has been labeled.



At any particular time, the counter will be in Normal Count, Rate Count or Batch Count mode (provided the TOTAL button is not being pressed and Preset Mode [described later] is not activated). The current mode is determined by the state of the green Normal and Batch LEDs as indicated in the table below.

To toggle between display of the Normal and Rate Count (with the Batch LED off),

	NORMAL LED	BATCH LED
Normal Count	on	off
Rate Count	off	off
Batch Count	don't care	on

press the NORMAL button. To turn the Batch Count on and off (regardless of the Normal LED state) press the BATCH button.

NORMAL COUNT

The number displayed is the total number of products passing through the machine since the counter was last reset. It is incremented each time a label is applied to a product. The counter is reset by pressing the RESET button.

RATE COUNT

The number displayed is the current application rate in products per minute. It is calculated using the average time delay between the last few most recently labelled products. After a break of a few seconds, the displayed value reverts to zero.

BATCH COUNT

A 'count-down' counter can be used to set an output when it has expired. When the Batch LED is on, the Batch Count is set by pressing the up and down buttons next to the SET button. A single button press will advance the number by 1 increment in the desired direction. If the button is pressed and held, the number will advance continuously, initially at a slower pace then at a faster pace after a few increments. The Batch Count can be set to zero by pressing the RESET button.

The Batch Count will decrement as each product is labelled. When equal to zero, the yellow BATCH END light comes on. Other action can be taken depending on the requirements of individual customers.

TOTAL COUNT

If the TOTAL button is pressed and held in either mode, the overall Product Count for a Label Head is displayed.

All numbers displayed in this section have a range of 0 to 99,999,999.

LABEL FEED

Each press of the label FEED button will cause a label to be immediately fed from the label web, without advancing the product counter. The label flag and length facilities will operate as if the detection of a product had triggered the label feed. This control is useful when setting up a machine for a particular label.



LABEL JOG

If the JOG button is pressed *and held*, the label web will advance at a slower 'jog' speed, enabling easy, automated movement and positioning of the label web.



LABEL SPEED RATIO

The speed of the label can be set as a percentage of the machine speed. To set this ratio, press and hold the LABEL HEAD button until the red or green light next to the button begins to flash. All displays blank except the LABEL PITCH display. The display shows the current Label Speed Ratio setting. This setting can then be modified as for the Label Pitch. To complete the setting, momentarily press the LABEL HEAD button.

The setting ranges from 25% to 400%, where a setting of 100 will match the Label and Conveyor speeds. Note that the Label Speed has a lower limit and an upper limit depending on machine configuration. The Label Speed will always operate inside these limits regardless of the Speed Ratio setting.

PRINTER STAMP TIME

When a Label Printer (Hot Foil Coder or Thermal Ribbon Printer) is mounted on a Label Head, a signal is generated by the Label Head Controller board after each label is fed. In the case of a Hot Foil Coder, this is used to operate the Coder Stamp. For a Thermal Ribbon Printer, this can be used to activate a tamping device to apply the label to a product. The Printer Stamp Time is the time of activation of this signal.

ADJUSTMENT PROCEDURE

The Printer Stamp Time is displayed by pressing and holding the PRINTER button until the light next to it begins to flash. All displays blank except the LABEL PITCH display, which shows the current Printer Stamp Time setting. These setting can then be modified as for the Label Pitch. The setting is in seconds and ranges from 0s to 9.99s in steps of 0.01s. A setting of 0 will inhibit this signal. To complete the setting, momentarily press the PRINTER button.

PRESETS

Up to 100 combinations (presets) of machine settings can be stored in the machine's memory for recall at any time.

PRESET MODE

To enter 'Preset Mode', the SET button on the **Control Panel for Label Head A** should be pressed and released. The Product Counter display will change to '- - - - - 0' on all Label Head control panels, indicating Preset 0. This preset always contains the current machine settings.

PRESET ADJUSTMENT

Pressing the SET UP and DOWN buttons change the Preset Number. To advance the preset number quickly, press and hold the UP or DOWN button. The Control Panels will display the settings for the currently selected preset when the UP or DOWN button is released. The settings for a particular Preset Number can be changed using the methods described in the preceding sections. To return to the original machine settings, go to Preset #0. When the Preset Number is changed, any changes to settings for the previous Preset Number will be saved. To exit 'Preset Mode', the SET button on the **Control Panel for Label Head A** should be pressed and released. The Product Counter displays will revert to their original display.

QUICK SET

To load all the current machine settings into a Preset Number, press the SET button for 2 seconds until the displayed settings revert to the current machine settings. These settings are thus stored in the current Preset Number.

FUNCTION BUTTONS F1 - F6

These are general purpose controls designed to perform functions, additional to the standard ones, specific to particular machine configurations. Some of these are listed below.

ONE/TWO LABELS AND SECOND LABEL POSITION (F1)

Where a Label Head is feeding labels onto a vacuum wrap conveyor, the facility exists for feeding 2 labels onto the one product. Pressing F1 will toggle the label head between feeding one and two labels – for 1 label the light is off, for 2 labels the light is on. To set the delay between the 2 labels, F1 is pressed and held for 2 seconds until the yellow light begins flashing. The delay setting is then displayed and can be set in the Label Position display. The number represents the distance the conveyor moves between the first label finishing and the second label starting. It is roughly proportional to the distance between labels on the product. To complete the setting, F1 is pressed again momentarily. Both the number of labels and the second label position can be stored in a preset.

PRODUCT PITCH (F2)

Occasionally a single product will cause multiple activations of the Product Sensor, causing an incorrect Product Count and possibly extra label feeds. To overcome this problem, a distance can be set during which any signals from the Product Sensor are disregarded. To set this distance, F2 is pressed and held for 2 seconds until the yellow light begins flashing. The distance setting is then displayed and can be set in the Label Position display. The number represents the distance of conveyor movement after an initial Product Sensor signal during which further signals are disregarded. To complete the setting, F2 is pressed again momentarily. This setting can be stored in a preset.

ALARM RESET (F6)

The labeller can incorporate an alarm (often a flashing blue light) to indicate a condition requiring the attention of the operator. If this alarm requires resetting manually, then the yellow F6 light will flash when the alarm is activated. The F6 button is pressed to reset the alarm.

LABELLING OF ROUND CONTAINERS WITH AND WITHOUT ORIENTATION

This type of standard machine incorporates pneumatically-actuated rollers to trap a round container for application of 1 or 2 labels. Typically five different operating modes are available on the machine. At any time, one of these modes is active. The currently active mode is indicated by a light above one of the function buttons F1 - F5. To change to another mode, just press and release the appropriate function button.

Operating Modes

1. Flat or Wrap - F1

The pneumatic mechanism is disabled. The label head operates as for a standard application. Only one label is applied. The application speed will depend on whether the Overhead Conveyor (normal speed) or Wrap Conveyor (double speed) is turned on.

2. Round, 1 label, no orientation - F2

This is the first of four modes involving the pneumatic roller mechanism. The sequence of operations is as follows:

1. The container is detected by the Product Sensor.
2. After the Extend Roller Delay (see below), the pneumatic mechanism is operated to trap the container and begin its rotation.

3. After the Bottle Stabilising Delay (see below), the label is applied.
4. After the Retract Roller Delay (see below), the pneumatic mechanism is retracted and the container released.

3. Round, 2 labels, no orientation - F3

This is the second of four modes involving the pneumatic roller mechanism. The sequence of operations is as follows:

1. The container is detected by the Product Sensor
2. After the Extend Roller Delay (see below), the pneumatic mechanism is operated to trap the container and begin its rotation.
3. After the Bottle Stabilising Delay (see below), the first label is applied.
4. After the Second Label Position Delay (see below), the second label is applied.
5. After the Retract Roller Delay (see below), the pneumatic mechanism is retracted and the container released.

4. Round, 1 label, orientation - F4

This is the third of four modes involving the pneumatic roller mechanism. The sequence of operations is as follows:

1. The container is detected by the Product Sensor
2. After the Extend Roller Delay (see below), the pneumatic mechanism is operated to trap the container and begin its rotation.
3. After the Bottle Stabilising Delay (see below), the Orientation Sensor searches for the leading edge of the Orientation Mark on the container.
4. Once this is found, the First Label Position Delay (see below) occurs.
5. After this delay, the label is applied.
6. After the Retract Bottle Delay (see below), the pneumatic mechanism is deactivated and the container released.

5. Round, 2 labels, orientation - F5

This is the last of four modes involving the pneumatic roller mechanism. The sequence of operations is as follows:

1. The container is detected by the Product Sensor
2. After the Extend Roller Delay (see below), the pneumatic mechanism is operated to trap the container and begin its rotation.
3. After the Bottle Stabilising Delay (see below), the Orientation Sensor searches for the leading edge of the Orientation Mark on the container.
4. Once this is found, the First Label Position Delay (see below) occurs.
5. After this delay, the label is applied.
6. After the Second Label Position Delay (see below), the second label is applied.
7. After the Retract Roller Delay (see below), the pneumatic mechanism is deactivated and the container released.

The following delays are set on the Control Panel:

<p>First Label Position Delay</p>	<ul style="list-style-type: none"> • Applicable in Modes 4 and 5 (when orientation is being used). • Delay between detection of orientation mark and feeding of the first (or only) label. • Set under Label Position without any function keys pressed.
<p>Second Label Position Delay</p>	<ul style="list-style-type: none"> • Applicable in Modes 3 and 5 (when two labels are being applied). • Delay between first label ending and second label starting to feed. • Represents the approximate distance in millimetres between the first and second label. • To set the delay, F1 is pressed for 2 seconds. • The yellow light will flash and the Second Label Position Delay will be shown in the Label Position display. • After setting, F1 is pressed again to restore the display.
<p>Extend Roller Delay</p>	<ul style="list-style-type: none"> • Delay between product sensing and activation of the rollers. • The number represents the distance of conveyor movement. • To set the delay, F2 is pressed for 2 seconds. • The yellow light will flash and the Extend Roller Delay will be shown in the Label Position display. • After setting, F2 is pressed again to restore the display.
<p>Bottle Stabilising Delay</p>	<ul style="list-style-type: none"> • Delay between activation of the rollers and the beginning of either <i>a</i>) feeding of the first label (Modes 2 & 3), or <i>b</i>) looking for the registration mark on the container (Modes 4 & 5). • Allows the rollers time to fully capture the container and for the container to reach its full rotating speed before the process continues. • To set the delay, F2 is pressed for about 2 seconds. • The yellow light will flash and the Bottle Stabilising Delay will be shown in the Label Flag display. • The number represents the distance of conveyor movement. • After setting, F2 is pressed again to restore the display.
<p>Retract Roller Delay</p>	<ul style="list-style-type: none"> • Delay between the end of the last label being applied and retraction of the pneumatic rollers. • This provides for final wiping down of the label before the container is released. • To set the delay, F2 is pressed for about 2 seconds. • The yellow light will flash and the Retract Roller Delay will be shown in the Label Pitch display. • The number represents the distance of conveyor movement. • After setting, F2 is pressed again to restore the display.

Other functions

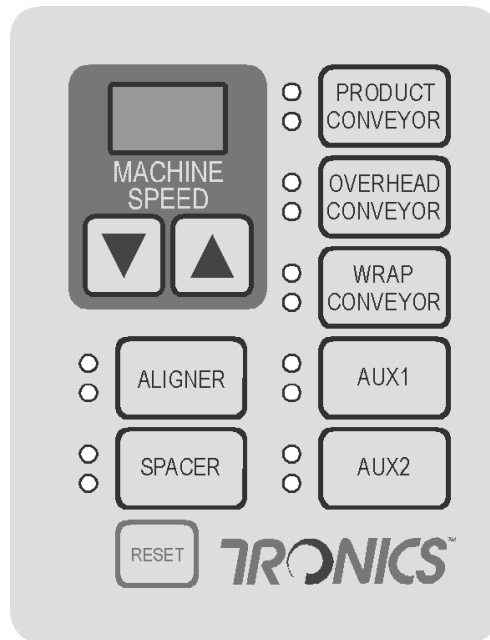
Orientation Setup:

- This can be used in Modes 4 and 5 to set the position and sensitivity of the Orientation Sensor.
- While this is active, all signals from the orientation sensor are ignored.
- To enter this mode, press and hold F6 until the yellow light begins to flash.
- To exit this mode, press F6 again.

Container Release:

- Momentarily pressing F6 causes the extended pneumatic mechanism to retract.

MASTER DRIVER CONTROLLER

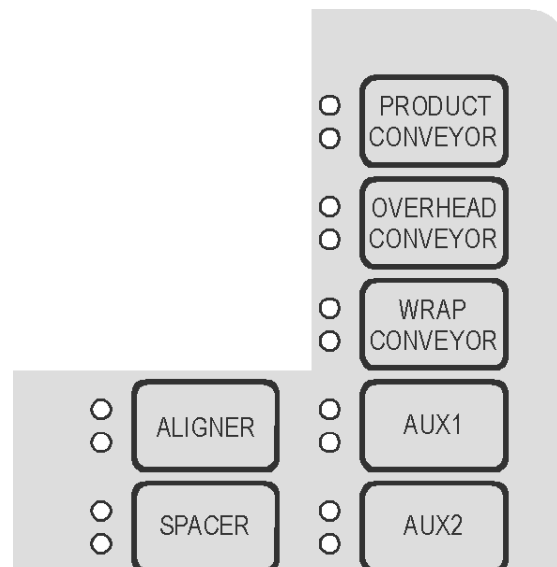


DRIVER POWER

Power to most of the machine components, excluding the Label Heads, is controlled with the 7 buttons shown. When the machine is switched on, the state of each component is indicated by a red (stopped) or green (operating) light adjacent to the button. This state will toggle each time the button is pressed. Note that the state will change when the button is *released* after being pressed. If neither light next to a button is lit, it indicates that the particular component is not installed on the machine. Pressing that button will have no effect.

Note: Combined Overhead / Wrap Driver

A standard machine configuration has both

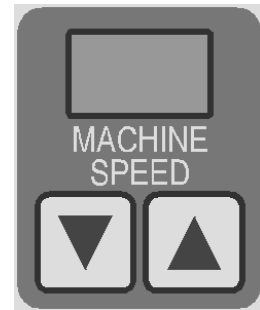


the Overhead and Wrap Conveyors operating off the same driver, as they will not be required to operate concurrently. In this case, the following operating conditions apply:

- The Overhead Conveyor and Wrap Conveyor can't both be turned on at any one time. To turn one on, the other must first be turned off.
- If the Overhead Conveyor Switch is on, whichever component is currently connected to the shared driver will move at "overhead speed", which is usually the same as the Product Conveyor speed.
- If the Wrap Conveyor Switch is on, whichever component is currently connected to the shared driver will move at "wrap speed", which is usually about twice the Product Conveyor speed.

MACHINE SPEED

The number displayed here is the Product Conveyor speed setting in metres per minute. The speed is increased or decreased in steps of 0.1m/min by pressing and holding the Δ or ∇ buttons. A machine fitted with standard label heads is limited to 30.0m/min. Note that if the Wrap Conveyor is turned on, the Machine Speed may automatically decrease to about 15m/min as at this speed the Wrap Conveyor and Label Head will be running at their maximum permissible speeds.



Altering the Machine Speed will in most cases cause the speed of all machine components to alter accordingly. An exception is when a DC motor driven Spacer Wheel is installed on the machine. In this case, a separate speed control is mounted on the Control Panel.

RESET

Pressing this button will cause all components to re-accelerate from the minimum speed up to the current Machine Speed. This can be used to quickly recover the machine from a stalled condition once the cause of the stall (eg. jammed container) has been removed.



SPEED PERCENTAGE

The speed of the Overhead Conveyor, Wrap Conveyor, Aligner, Spacer and Auxiliary units can be individually adjusted relative to the Main Conveyor speed*. This setting is displayed as a percentage.

To access this setting, the power button for the particular unit should be pressed and held for about 2 seconds. After this, the power LED next to the switch will flash and the speed percentage for the unit will be displayed. The percentage can be adjusted by pressing the Δ or ∇ buttons. If the unit is running, its speed will change accordingly. The range of possible settings is from 25% to 400%. Note though that a particular unit will not run at a speed outside its permissible range, regardless of the speed percentage setting. To complete the setting procedure, press the power button again to return to the normal machine speed display.

* Providing they are driven by separate stepper motors.

Note also that a stepper motor driven Spacer (Scroll) unit may require a setting considerably different from 100%, as container speed through the Scroll depends on the Scroll pitch as well as the speed.

PRESETS

The Machine Speed and all Speed Percentages can be stored in the presets accessed through Label Head A Control Panel. (Refer to the instructions on the Label Head controls for information about Presets.)

TROUBLESHOOTING GUIDE

This section is divided into two parts, Machine Setup Difficulty (for Operator) and Electronic Faults (for Service Technicians). Machine Setup Difficulties includes general problems that can be experienced with new operators. While, Electronic Faults is for those authorised to service electronic equipment.

Machine Setup Difficulty

Labels Feed Continuously then Stop

- Check the sensitivity of the Label Gap Sensor,
- Change Label Roll from other label Head and check (to eliminate a Label Stock related problem),
- Change Gap Sensor from other label Head and check (to eliminate a Gap Sensor related problem),

Drive Roller Stalls or Resonates

- Too much drag on labels caused by web tensioning Brush or dancer Arm Spring,
- Feed Spool jammed,
- The roll of labels is too large or heavy,
- Peel Plate is too sharp,
- Takeup Spindle is full or label Web on Takeup Spindle is slipping down due to insufficient tension from the fuse-it belt driving the Takeup Spindle,
- The Hot Foil Coder is not releasing the label in time for the next product. To check, turn the coder off and try labelling at the same speed,
- Damaged Driver, Motor, Motor Plug or Motor Wires from the driver to the motor (see Electronics Faults).

Extra Label applied to product

- In case of wrap labelling, Peel Plate is too close to the wrap conveyor,
- Label Gap Sensor is not seeing gaps consistently.

Label ejection speed is too slow - Position varies.

- Pressure Rollers are not engaged with rubber Driver Roller,
- Dirt/Adhesive buildup on rollers or Peel Plate... clean with cloth and mineral turpentine.

Labels not being ejected or missing

- Gap Sensor set too sensitive,
- Peel Plate edge is not sharp enough,
- Label die cut is too deep allowing some labels to stay on the Label Web as it passes over the edge of the Peel Plate,
- Product Sensor misaligned or needs sensitivity adjustment,
- Products too close together. Product Spacer Wheel may not be fitted or if fitted may need adjustment,
- Label roll finished,
- Label Head Power is switched off or fuse blown,
- Drive Roller slipping,
- Web broken,
- Labels missing on Label Roll,
- Feed Spool jammed,
- Label position is incorrectly set so that label does not contact product,
- If there is a high setting on the label position setting, this can have the same effect as the product being too close together (particularly when coding labels). Reposition product sensor and reduce setting on label position setting.

Crooked or Skewed Labels

- Product tilting at point of labelling,
- Peel Plate set too far away from passing Product,
- Peel Plate not parallel to surface being labelled,
- Label Head is tilted in the direction of Product Conveyor,
- Gap Sensor set too sensitive,
- Stabilising Conveyor not holding product firmly enough,
- For wrap labelling, Product rising as it is transported by the wrap conveyor,
- Product variation. A good test is to place several pairs of products side by side and rotate them with respect to a vertical line of reference between their two surfaces. Any gaps appearing along this line can indicate product variation,
- Label Guide Rings not set for even Label Web Path,
- Drive Roller and Pressure Roller out of alignment.

Inaccurate labelling – label Position Varying

- Web Tension Brush not applied or too loose,
- Product variation. Light weight plastic products damaged,
- Product orientation varying, set rails carefully and/or Squaring Wheels and other modules,
- Gap Sensor not adjusted correctly. Check labels are consistently stopping in the same position,
- Drive Roller slipping,

- Dirty rollers,
- Product Sensor not defining product reproducibly,
- Product moving across product conveyor set rails,
- Labels threaded incorrectly,
- Label gap varying.

Labels Creased or Bubbled

- Area where label is being applied contains “Complex Contours”. If the surface being labelled has curves in more than one direction this will make it impossible to apply a label without some creasing or bubbles,
- Peel Plate set too far back from passing product,
- Stabilising Conveyor not applying enough clamping force,
- Other module or Label Head interfering with smooth path of product during labelling,
- Uneven pressure from Peel Plate Wipe Down Brush,
- Too much label flag,
- Product damaged,
- Adhesive problems with labels,
- Too much label web tension,
- High levels of static electricity on the label or product.

Label Web breaks

- Die cutting of labels too deep. This may generally be seen by examining the Label Webbing (spent backing paper),
- Labels being accelerated and ejected too fast generally only occurs on very narrow roll of labels.

Electronic Faults

Electronic faults are rare and most fault are mechanical in nature and typically a setup problem. If an electronic fault is suspected, please contact Tronics or local Tronics representative. If there is a competent electronic technician available refer to the following ***Circuit Board Troubleshooting*** Section of this manual.

Label Drive Roller does not RUN

- Label Drive Roller has seized due to the motor being exposed to too much water,
- Gap Sensor is too sensitive,
- Product Sensor needs adjustment,
- Electronic Driver Fault (rare),
- Stepper motor damaged (very rare).

<p>NOTE: Under no circumstances should the rotor be removed from a stepper motor as this may cause its performance to be degraded by up to 80%. If the motor has seized then the front flange may be removed in an attempt to free the motor and get it working in an emergency situation. However, the rotor should not be removed axially.</p>
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Circuit Board Troubleshooting

Tronics Stepping Motor Circuit Boards are extremely reliable. Electronic problems are rare.

The faults are normally reported as "the motor does not run properly" and this of course is a symptom of a faulty board or wire connections. Even so, in the majority of such reported problems, the cause has been mechanical in nature and the first thing that should always be checked is that the motor turns freely with the power off. If the motor does not turn freely, it is most likely due to a dirt build up in the output drive area or the motor has become exposed to water and the rotor seized. If the problem is dirt build up, clean the dirt away, but if the rotor has seized due to a long term moisture build up a new motor is required and steps should be taken to prevent further moisture entering the motor.

Under no circumstances should the rotor be moved in the motor if for some reason the motor has been opened - it is preferable not to open the motor. The reason for this is the rotor is magnetized on site at the factory and any movement reduces the strength of the magnetic field and consequently the power of the motor. In some cases of extreme motor usage the bearing at each end of the rotor will require replacement. This can be done if extreme care is taken so as not to remove the rotor.

The motor connections should also always be checked as these have occasionally been pulled loose through mechanical mishaps.

To date there have only been two areas of electronic failure: Blown power transistors and or a faulty power supply. Either of these components appear to have failed spontaneously although the causes for the failure of the power transistors has often been shorting of the wiring to the motor.

Modular Electronics

To facilitate low down times and efficient remote location electronic service, Tronics Labelling Machines are designed with modular electronics. For each stepping motor, there is a motor driver module. Regardless of the function of the stepping motor, the driver module electronics consist of the same circuit board. This circuit board is mounted to a removable heat-sink above the individual driver power supply. In most cases, an inspection of the voltage L.E.D. will be enough to determine if a fault lies in the power supply of a driver. If so the complete driver can be removed from the machine and the power supply repaired or replaced. If the fault appears to be in the

circuit board itself, a simple swap of circuit board and heat-sink can be facilitated by the loosening of 4 small cap screws and a wire for wire transferal. (It is recommended that all driver repairs be left to Tronics who can supply a replacement driver and examine the damaged driver.

Voltage Checks

In order to isolate a problem, some relatively simple voltage checks can be done. Preferably a digital volt meter set on the 200 V DC range should be used with the common lead connected to ground (typically the Driver fan body). Voltage measurements are then taken with the other lead of the voltmeter at the screws of the screw connector nearest the fan. On the circuit board at either end of this connector are the letters 1C3LG and GH4C2 which designate the functions of these screw terminals in the order of the characters. The "1" means phase 1 of the motor, the "C" means the common between phases "1" and "3" of the motor, the "3" means phase 3 of the motor, the "L" means the low voltage power supply to the motor and the "G" means this terminal is ground. Working from the other end of this 10 way screw terminal block the "2" means phase "2" of the motor, the "C" means the common between phases 2 and 4 of the motor, the "4" means phase 4 of the motor, the "H" means the high voltage power supply to the motor and the "G" means ground. Normally only one of the adjacent "G" terminals is used. See table VC1.

To check if a power transistor has failed, disconnect the motor leads from terminals 1, C, 3 and 2, C, 4, noting their order for later replacement and measure the resistance between the ground and these terminals. A short circuit on any of these terminals will indicate which power transistor has failed. Locate the associated transistors and replace them as described in detail later in these instructions. Recheck the resistances between the screw terminals and ground, there should no longer be any evidence of a short circuit, however the resistance measurements may increase due to capacitors charging. Fit a new fuse and turn the unit on. If all is well turn the power off and carefully re-connect the motor wires to the screw terminals, again check the resistances from these screw terminals to ground, if a short still persists there is most likely a fault in the wires to the motor. Proceed with the voltage measurements as follows ... all should now be well.

Voltage measurements should be taken with the motor both running and stationary. Readings should be as follows:

Note: There is an L.E.D. indicator to give a visual indication of the Low voltage and High voltage supply.
--

TERMINAL	STATIONARY		RUNNING	
	One Phase	Two phases	Low	High
	On	On	Speed	Speed
1	5.5	1.3	13.5	44.3
C	5.5	4.1	14.9	45.0
3	5.5	4.0	13.6	44.3
L	5.6	5.1	5.1	5.7
G	0	0	0	0
G	0	0	0	0
H	59.3	59.2	56.2	54.1
4	1.5	1.4	13.3	43.6
C	4.7	4.2	14.6	44.3
2	4.5	4.0	13.3	43.6

Typical readings for 103-845-0245 motor

The motor can be run at low speed by setting the Machine Speed to Minimum. To make the motor run at high set the Machine speed to maximum. Depending on the actual speed and the load on the motor the phase voltages may vary from about 8 to 55 volts from very low speed to very high speed respectively, but the voltages of each of the phase terminals and commons should bear the same relationships to one another. That is, each phase terminal should have the same voltage on it within about 1 or 2 volts and the commons should have about the same voltages within about 1 or 2 volts. In each case the common voltage should be about 0.5 to 2 volts higher than their associated phases.

When the motor is stationary there are eight possible combinations of voltages from the numbers 1, 2, 3 and 4 phase terminals with either one or two phases being on as indicated by a low voltage on that terminal. Typical examples of one and two phases are in the table above. Please note that phases 1 and 3 or phases 2 and 4 should not be on simultaneously with the motor stationary. If this situation occurs, one of the power transistors has failed and is permanently on, therefore the motor will run erratically. When the motor is running, phases 1 and 3 or phases 2 and 4 should not be on simultaneously but it is impossible to tell this using a voltmeter as outlined here (an oscilloscope is required).

If the voltages measured on the phases or commons ("C") do not tally with these voltages in the table it indicates that one of the power (located under the circuit board and attached to the heat sink under the board) has failed and it will almost certainly be the power transistor associated with the terminal giving the odd voltage. Please note there are two sets of power transistors, one set on either side of

the board, associated with the set of screw terminals towards that side of the board.

If a power transistor has failed it is generally the safest practice to replace all three power transistors on the side that has failed.

NOTE: Before touching the transistors the power supply capacitors beneath the heat-sink should be discharged, this is done by shorting the "H" and "L" terminals to ground using a length of wire. A decent spark may occur!

When removing the power transistors take care not to lose any of the insulating parts as they must be replaced exactly as before when re-securing the transistors to the heat-sink. Also try not to remove the plated through holes in the circuit board when de-soldering the circuit board (although the board will still work if the hole is pulled out), and re-solder the transistor from the top and bottom of the board when it is replaced. Use a multi-meter to check the resistance between the metal tag on each transistor and the heat-sink to ensure that the insulator is effective. The resistance should exceed 800 ohms and appear to rise as the capacitors in the power supply charge up. If this is not so and there is a short circuit then remove, check and refit the insulator and nylon bush around the screw. Please note that the board is essentially made up of two identical sides and voltage, resistance etc comparisons can be made from side to side for the purposes of trouble shooting.

Another fault that has occurred in the past is the failure of bridge rectifiers located in the power supply and attached to the underside of the heat-sink. If this problem occurs the voltage measured at the "L" terminal is 3 volts or less and the motor is easy to turn when it should be locked in its stationary position, in fact when this problem occurs the motor runs better the faster it runs. If this is the problem replace one or more of the bridge rectifiers with the same or equivalent part taking care to put all wires back in their original positions.

NOTE: If at any time the wires from the power supply to the "H" and "L" terminals are disconnected, extreme care should be taken to replace them in the correct order. Failure to do so will result in transformer damage or a blown fuse. The wire from the 8,000 or 10,000 microfarad, 75 volt capacitor goes to the "H" terminal.

Setting the Motor Kick Current

About 60 mm. towards the centre of the circuit board from the 10 way motor screw terminal connector is a vertical small multi-turn potentiometer which controls the peak current to the motor. This generally should not be touched as it is preset at the factory. If however it has been turned it can be reset correctly using a digital multi-meter set to the 2 Volt DC range with the common lead connected to ground and the test lead touching the point on the circuit board next to this potentiometer labelled "TP+". Turn this potentiometer until a voltage is obtained that is 1/20 th. of the current rating of the motor, plus 0.05 volts. For example a 103-845-1 motor rated at 4 Amps uses a potentiometer setting that gives 0.25 Volts and a 103-845-0245 motor rated at 6.7 Amps uses a potentiometer setting that gives 0.385 Volts.



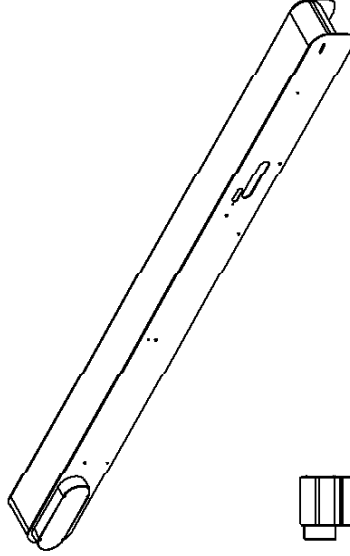
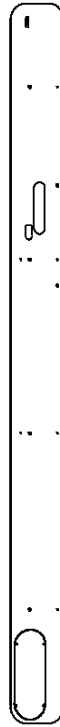
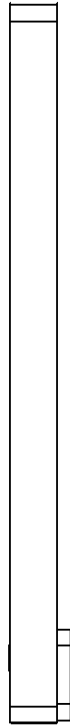
Parts Manual

TRONICS

**CONVEYOR ASSEMBLY
(2-9655-*-1-*)**

SECTION 3

SHEET 1



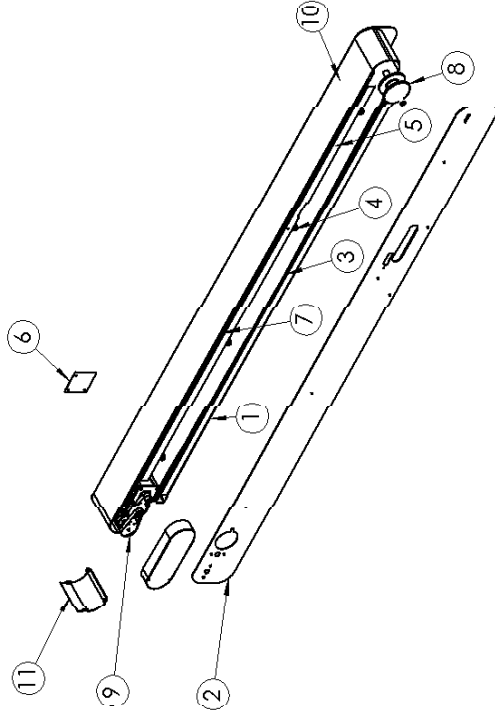
VARIANT	CONVEYOR WIDTH	CONVEYOR LENGTH	TRANSMISSION MOUNTING SIDE
2-9655-1-1*	7 1/2"	3000	RHS
2-9655-2-1*	10"	3000	RHS
2-9655-3-1*	4 1/2"	3000	RHS
2-9655-4-1*	7 1/2"	2400	RHS
2-9655-5-1*	10"	2400	RHS
2-9655-6-1*	4 1/2"	2400	RHS
2-9655-A-1*	7 1/2"	3000	LHS
2-9655-B-1*	10"	3000	LHS
2-9655-C-1*	4 1/2"	3000	LHS
2-9655-D-1*	7 1/2"	2400	LHS
2-9655-E-1*	10"	2400	LHS
2-9655-F-1*	4 1/2"	2400	LHS

TRONICS

**CONVEYOR ASSEMBLY
(2-9655-*-1-*)**

**SECTION
SHEET**

**3
2**



Item	Location	Part No.	Description	Qty.
1		1-9654-1-1-*	3M X 7.5" CONVEYOR FRAME WELDED ASSY	1
		1-9654-2-1-*	2.4M X 7.5" CONVEYOR FRAME WELDED ASSY	1
		1-9654-4-1-*	3M X 4.5" CONVEYOR FRAME WELDED ASSY	1
		1-9654-5-1-*	2.4M X 4.5" CONVEYOR FRAME WELDED ASSY	1
		1-9654-7-1-*	3M X 10" CONVEYOR FRAME WELDED ASSY	1
		1-9654-8-1-*	2.4M X 10" CONVEYOR FRAME WELDED ASSY	1
2		2-9658-1-1-*	3M CONVEYOR SIDE PANEL	2
		2-9658-2-1-*	2.4M CONVEYOR SIDE PANEL	2
3		2-4834-11-1-*	2.4M X 4.5" WEARING STRIP	1
		2-4834-13-1-*	2.4M X 7.5" WEARING STRIP	1
		2-4834-14-1-*	2.4M X 10" WEARING STRIP	1
		2-4834-16-1-*	3M X 4.5" WEARING STRIP	1
		2-4834-18-1-*	3M X 7.5" WEARING STRIP	1
		2-4834-19-1-*	3M X 10" WEARING STRIP	1

TRONICS

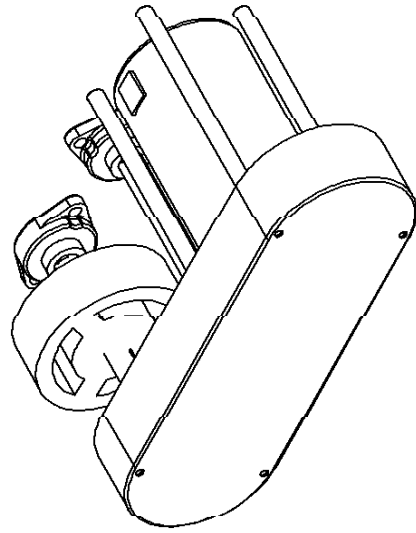
**CONVEYOR ASSEMBLY
(2-9655-*-1-*)**

**SECTION
SHEET**

**3
3**

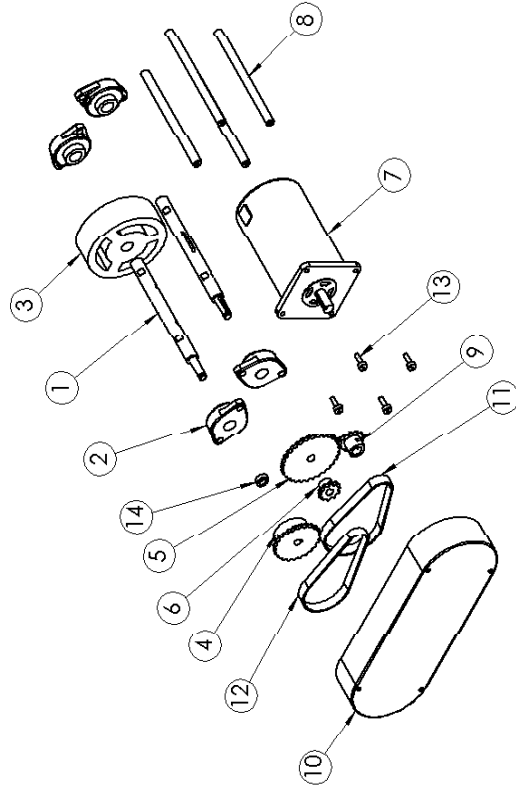
Item	Location	Part No.	Description	Qty.
4		2-6276-1-1-*	SPACER BAR (4.5")	5
		2-6276-3-1-*	SPACER BAR (7.5")	5
		2-6276-4-1-*	SPACER BAR (10")	5
5		2-9665-1-1-*	3MX 7.5" CONVEYOR TOP CHANNEL	1
		2-9665-3-1-*	3MX 4.5" CONVEYOR TOP CHANNEL	1
		2-9665-4-1-*	3MX 10" CONVEYOR TOP CHANNEL	1
		2-9665-5-1-*	2.4M X 7.5" CONVEYOR TOP CHANNEL	1
		2-9665-7-1-*	2.4M X 4.5" CONVEYOR TOP CHANNEL	1
		2-9665-8-1-*	2.4M X 10" CONVEYOR TOP CHANNEL	1
6		2-9669-1-1-*	MOTOR HOLE COVER	1
7		2-9676-1-1-*	3MX 7.5" CONVEYOR GUIDE	2
		2-9676-2-1-*	2.4M X 7.5" CONVEYOR GUIDE	2
		2-9676-4-1-*	3MX 10" CONVEYOR GUIDE	2
		2-9676-5-1-*	2.4M X 10" CONVEYOR GUIDE	2
		2-9676-7-1-*	3MX 4.5" CONVEYOR GUIDE	2
		2-9676-8-1-*	2.4M X 4.5" CONVEYOR GUIDE	2
8		V-SPK-I-870-21	CONVEYOR IDLER SPROCKET-820-21(RCS)	1
9	SECTION - 3.1	C-9671-1-1-*	CONVEYOR TRANSMISSION ASSY (7.5")	1
		C-9671-2-1-*	CONVEYOR TRANSMISSION ASSY (10")	1
		C-9671-3-1-*	CONVEYOR TRANSMISSION ASSY (4.5")	1
10		V-CHN-K730-3	TABLE TOP CHAIN-LF820-K750 (RCS)	1
11		2-9076-1-1-*	FRONT COVER (7.5")	1
		2-9076-2-1-*	FRONT COVER (10")	1
		2-9076-3-1-*	FRONT COVER (4.5")	1

TRONICS	CONVEYOR TRANSMISSION ASSY (C-9671-*-1-*)	SECTION 3.1
		SHEET 1



VARIANT DETAILS	
C-9671-1-1-*	CONVEYOR TRANSMISSION (7.5")
C-9671-2-1-*	CONVEYOR TRANSMISSION (10")
C-9671-3-1-*	CONVEYOR TRANSMISSION (4.5")

TRONICS	CONVEYOR TRANSMISSION ASSY (C-9671-*-1-*)	SECTION 3.1
		SHEET 2

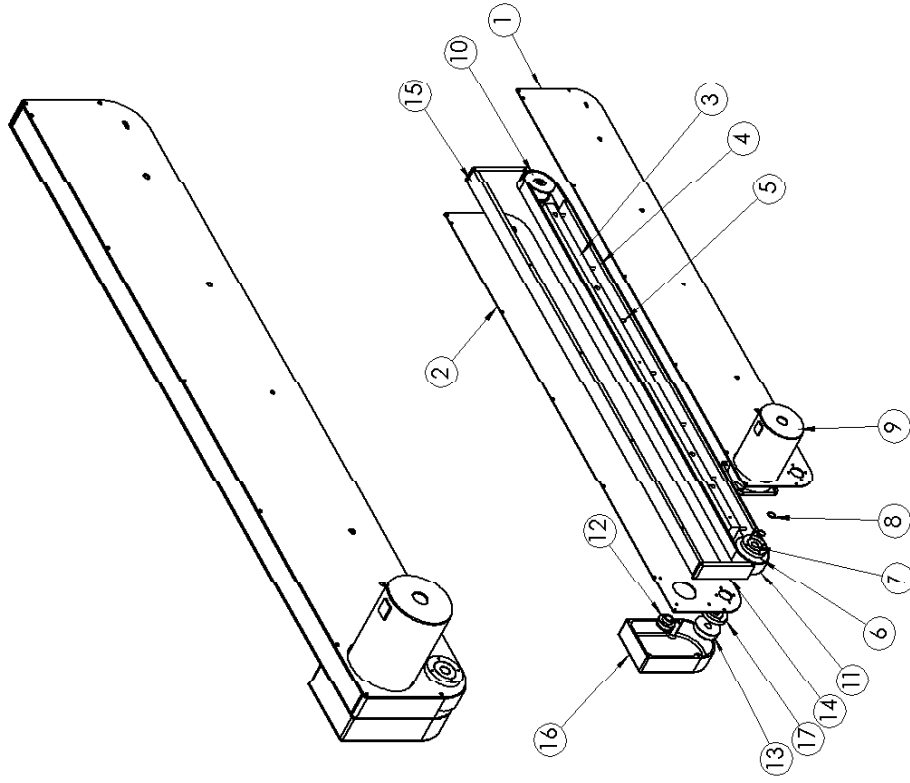


Item	Location	Part No.	Description	Qty.
1		2-A223-1-1-*	DRIVE/IDLE SHAFT (4.5" CONVEYOR)	2
		2-A223-2-1-*	DRIVE/IDLE SHAFT (7.5" CONVEYOR)	2
		2-A223-3-1-*	DRIVE/IDLE SHAFT (10" CONVEYOR)	2
2		V-BRG-ASFB204	BEARING ASSY.- ASFB204-012	4
3		V-SPK-820-21	CONVEYOR DRIVE SPROCKET-820-2((RCS)	1
4		2-A223-3-1-*	24" SPROCKET SIMPLEX .06B)	1
5		2-A223-4-1-*	30" SPROCKET SIMPLEX .06B)	1
6		2-A223-1-1-*	10" SPROCKET SIMPLEX .06B)	1
7		V-MTR-103-8932	STEPPER MOTOR-103-8932-0240(SANYO DENKI)	1
8		2-9886-1-1-*	MOTOR SPACER (7.5" CONVEYOR)	4
		2-9886-2-1-*	MOTOR SPACER (10" CONVEYOR)	4
		2-9886-3-1-*	MOTOR SPACER (4.5" CONVEYOR)	4
9		2-A223-2-1-*	12" SPROCKET SIMPLEX .06B)	1
10		2-A513-1-1-*	PULLEY COVER	1
11		V-CHN-1-06B-19_PITCH	ROLLER CHAIN SIMPLEX - 19_PITCH-.06B(MALCO)	1
12		V-CHN-2-06B-19_PITCH	ROLLER CHAIN SIMPLEX - 19_PITCH-.06B(MALCO)	1
13		V-SCS-M6x20	SOCKET HEAD CAP SCREW - M6x20	4
14		2-A453-1-1-*	TRANSMISSION SPACER	1

TRONICS

**OVERHEAD ASSEMBLY
(3-4909-* -1-*)**

SECTION 4
SHEET 1



VARIANT	DETAILS
3-4909-1-1*	OVERHEAD ASSEMBLY (600 MM)
3-4909-2-1*	OVERHEAD ASSEMBLY (750 MM)
3-4909-4-1*	OVERHEAD ASSEMBLY (1250 MM)
3-4909-5-1*	OVERHEAD ASSEMBLY (1500 MM)

TRONICS

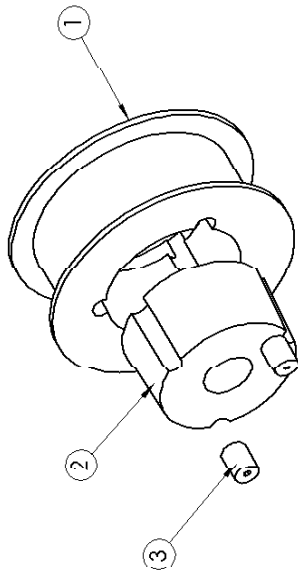
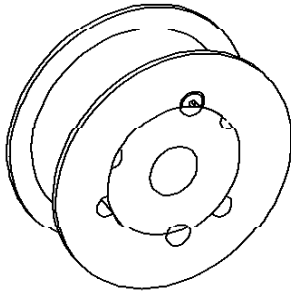
**OVERHEAD ASSEMBLY
(3-4909-* -1-*)**

SECTION 4
SHEET 2

Item	Location	Part No.	Description	Qty.
1		3-2195-1-1*	SIDE PANEL LH (500 MM)	1
		3-1806-1-1*	SIDE PANEL LH (750 MM)	1
		3-2127-1-1*	SIDE PANEL LH (1250 MM)	1
		3-1518-1-1*	SIDE PANEL LH (1500 MM)	1
2		3-2195-2-1*	SIDE PANEL LH (500 MM)	1
		3-1806-2-1*	SIDE PANEL LH (750 MM)	1
		3-2127-2-1*	SIDE PANEL LH (1250 MM)	1
		3-1518-2-1*	SIDE PANEL LH (1500 MM)	1
3		3-2529-1-1*	MOUNTING BAR (500 MM)	1
		3-7629-1-1*	MOUNTING BAR (750 MM)	1
		3-7629-4-1*	MOUNTING BAR (1500 MM)	1
4		3-7630-1-1*	BELT SUPPORT (500 MM)	1
		3-7630-2-1*	BELT SUPPORT (750 MM)	1
		3-7630-4-1*	BELT SUPPORT (1250 MM)	1
		3-7630-5-1*	BELT SUPPORT (1500 MM)	1
5		3-0825-0-1*	COMPRESSION SPRING	7
6	SECTION - 4.1	3-0859-0-1*	DRIVING PULLEY ASSY	1
7		3-0755-0-1*	DRIVE SHAFT	1
8		V-CLIP-N1400_0062	EXTERNAL CIRCLIP IMPERIAL-N1400 0062	3
9		V-MTR-103H89222-094*	STEPPER MOTOR-103H89222-0941	1
10	SECTION - 4.2	3-0895-0-1*	DRIVEN ROLLER ASSEMBLY	1
11		3-0903-1-1*	BELT - 420H100 (500 MM)	1
		3-0903-3-1*	BELT - 800H100 (750 MM)	1
		3-0903-4-1*	BELT - 1000H100 (1250 MM)	1
		3-0903-5-1*	BELT - 1250H100 (1500 MM)	1
12		3-3991-0-1*	DRIVE PULLEY	1
13		3-3992-0-1*	DRIVEN PULLEY	1
14		3-1382-0-1*	AL. SIDE COVER	2
15		3-7673-1-1*	TOP COVER (500 MM)	1
		3-7673-2-1*	TOP COVER (750 MM)	1
		3-7673-4-1*	TOP COVER (1250 MM)	1
		3-7673-5-1*	TOP COVER (1500 MM)	1
16		3-2172-0-1*	DRIVING GEAR COVER	1
17	SECTION - 4.3	3-4874-0-1*	BEARING HUB ASSY	2

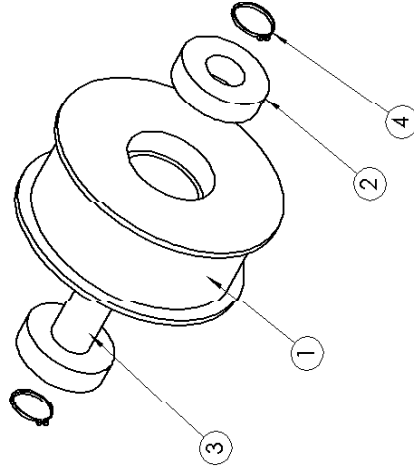
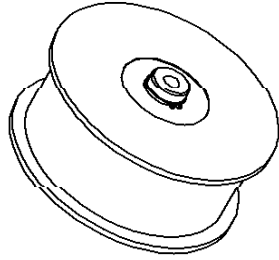
TRONICS	SECTION
	SHEET

TRONICS	DRIVING PULLEY ASSY (3-0859-0-1-*)	SECTION	4.1
		SHEET	1



Item	Location	Part No.	Description	Qty.
1		V-PLY-18H100	FULLEY 18H100	1
2		V-BSH-1210	5/8" TAPER BUSH (1210)	1
3		V-GSC-M8x10	GRUB SCREW M8x10	2

TRONICS	DRIVEN ROLLER ASSY (3-0895-0-1-*)	SECTION	4.2
		SHEET	1

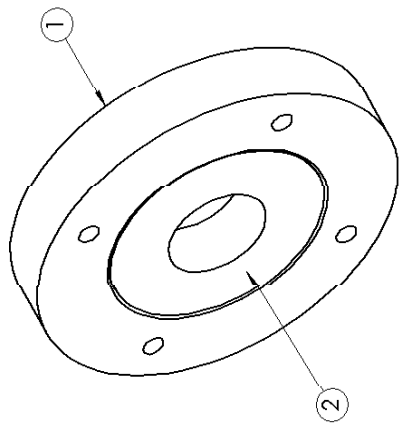


TRONICS	SECTION	SHEET

Item	Location	Part No.	Description	Qty
1		3-0292-0-1-*	DRIVEN ROLLER	1
2		V-BRG-RBZ	1/2" BEARING (CBC)	2
3		3-0295-0-1-*	DRIVEN SHAFT	1
4		V-CLP-N1400_0050	EXTERNAL CIRCLIP IMPERIAL-N1400 0050 (CEC)	2

TRONICS	SECTION
	SHEET

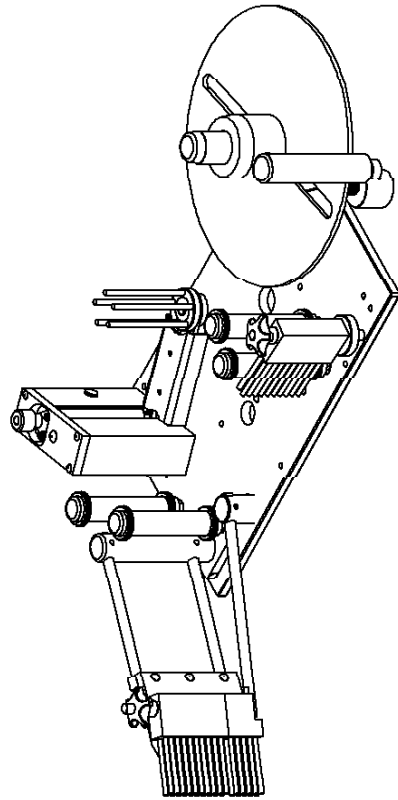
TRONICS	BEARING HUB ASSY (3-4874-0-1-*)	SECTION	4.3
		SHEET	1



Item	Location	Part No.	Description	Qty.
1		3-1465-0-1-*	BEARING HUB	1
2		V-BRG-R10Z	13/8" BEARING R10Z (CBC)	1

TRONICS	SECTION
	SHEET

TRONICS	LABEL HEAD ASSY (4-0745-*-1-*)	SECTION	5
		SHEET	1



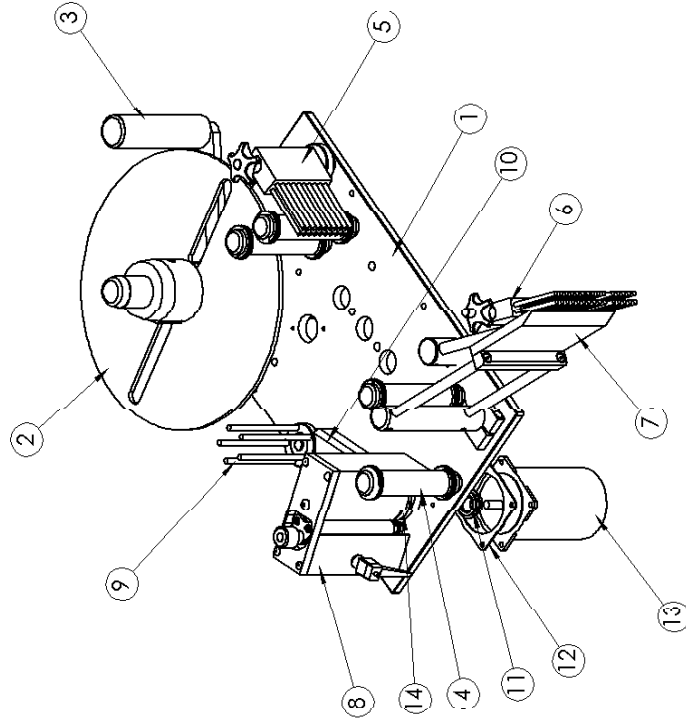
VARIAN	DETAILS
4-0745-1-1-*	LABEL HEAD ASSY - RHS (115 MM)
4-0745-2-1-*	LABEL HEAD ASSY - RHS (215 MM)
4-0745-3-1-*	LABEL HEAD ASSY - RHS (265 MM)
4-0745-7-1-*	LABEL HEAD ASSY - LHS (115 MM)
4-0745-8-1-*	LABEL HEAD ASSY - LHS (215 MM)
4-0745-9-1-*	LABEL HEAD ASSY - LHS (265 MM)

TRONICS

**LABEL HEAD ASSY
(4-0745-*-1-*)**

SECTION 5

SHEET 2



TRONICS

**LABEL HEAD ASSY
(4-0745-*-1-*)**

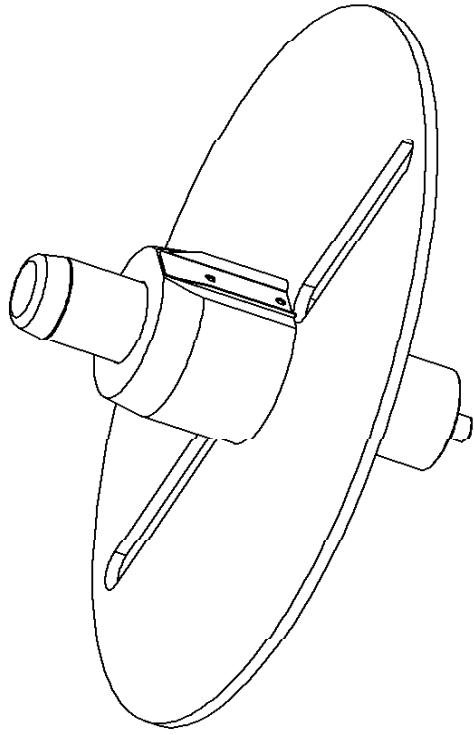
SECTION 5

SHEET 3

Item	Location	Part No.	Description	Qty.
1		4-7302-1-1-	LABELING BASE PLATE	1
2	SECTION - 5.1	4-0579-*-1-	REEL SHAFT SUB ASSY	1
3	SECTION - 5.2	4-0693-*-1-	DANCING ARM SUB ASSY	1
4	SECTION - 5.3	4-7996-*-1-	GUIDE ROLLER ASSY	3
5	SECTION - 5.4	4-1192-*-1-	PRESSURE BRUSH SUB ASSY	1
6	SECTION - 5.5	4-7713-*-1-	PEEL PLATE BRUSH ASSY	1
7	SECTION - 5.6	4-8005-*-1-	LABEL HEAD PEEL PLATE ASSY	1
8	SECTION - 5.7	4-8478-*-1-	PINCH ROLLER ASSEMBLY	1
9	SECTION - 5.8	4-0587-*-1-	TAKE UP REEL ASSY	1
10		4-0629-1-1-	DRIVING BELT GUARD	1
11		4-5235-1-1-	MOTOR SEAL FLANGE	1
12		6-0699-1-1-	STEPPING MOTOR SPACER	1
13		V-MTR-103.845-0245	STEPPER MOTOR-103.845-0245 (SANYO DENKI)	1
14		4-0739-0-1-	TAKE-UP REEL BELT	1

TRONICS	SECTION
	SHEET

TRONICS	REEL SHAFT SUB ASSY (4-0579*-1-*)	SECTION	5.1
		SHEET	1

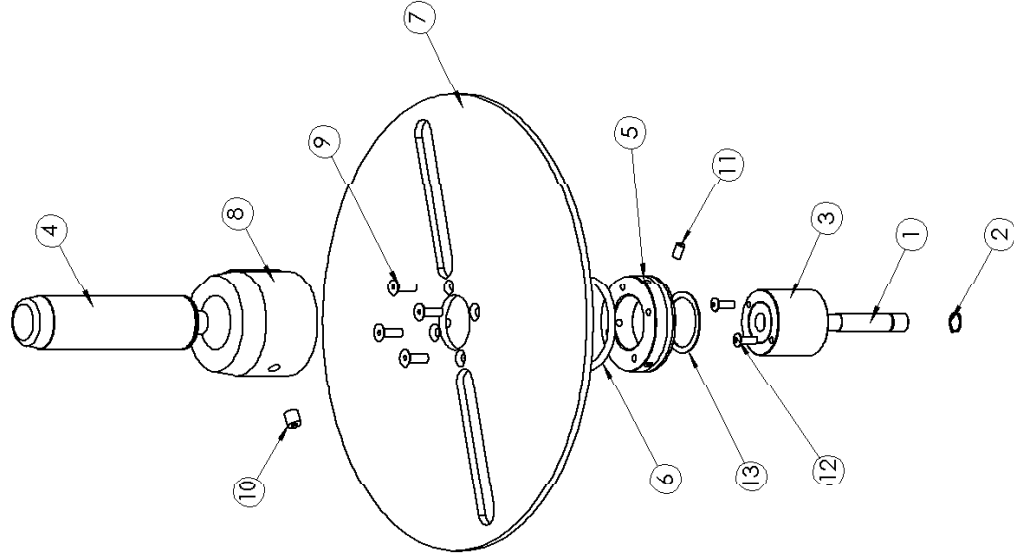


VARIANT	DETAILS
4-0579-1-1-*	REEL SHAFT SUB ASSY (115MM LABEL HEAD)
4-0579-2-1-*	REEL SHAFT SUB ASSY (215MM LABEL HEAD)
4-0579-3-1-*	REEL SHAFT SUB ASSY (255MM LABEL HEAD)

TRONICS

**REEL SHAFT SUB ASSY
(4-0579-*.1-*)**

SECTION 5.1
SHEET 2



TRONICS

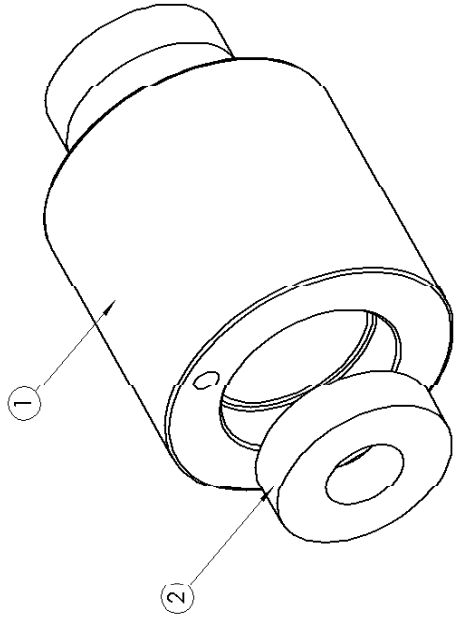
**REEL SHAFT SUB ASSY
(4-0579-*.1-*)**

SECTION 5.1
SHEET 3

Item	Location	Part No.	Description	Qty.
1		4-0440-1-1*	SPINDLE SHAFT	1
2		V-CLP-N1400_0050	EXTERNAL CIRCLIP IMPERIAL-N1400 0050 (CBC)	1
3	SECTION - 5.1.1	4-0661-1-1*	DANCING ARM BRG HUB ASSY	1
4		4-2963-1-1*	REEL SHAFT (FOR 115MM LABEL HEAD)	1
		4-2963-2-1*	REEL SHAFT (FOR 215MM LABEL HEAD)	1
		4-2963-3-1*	REEL SHAFT (FOR 265MM LABEL HEAD)	1
5		4-0442-1-1*	DSC BRAKE	1
6		4-7798-1-1*	DSC BRAKE RUBBER	1
7		4-0096-1-1*	LABELING DISC (335 M/M)	1
8	SECTION - 5.1.2	4-B325-1-1*	REEL CORE ASSEMBLY (65 MM LONG)	1
9		V-CSK-M6x16	COUNTERSUNK SCREW -M6x16	4
10		V-GSC-M10x10	GRUB SCREW M10x10	1
11		V-GSC-M6x10	GRUB SCREW M6x10	3
12		V-BCS-M5x16	BUTTON HEAD CAP SCREW - M5x16	2
13		V-CLP-N1400_0150	EXTERNAL CIRCLIP IMPERIAL-N1400 0150 (CBC)	1

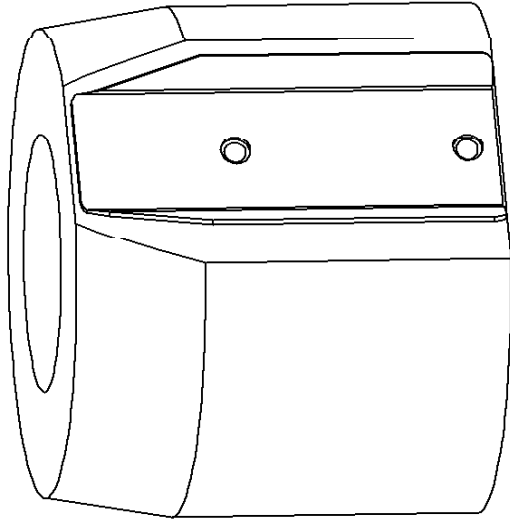
TRONICS	SECTION
	SHEET

TRONICS	DANCING ARM BRG HUB ASSY (4-0661-1-1-1-*)	SECTION	5.1.1
		SHEET	1



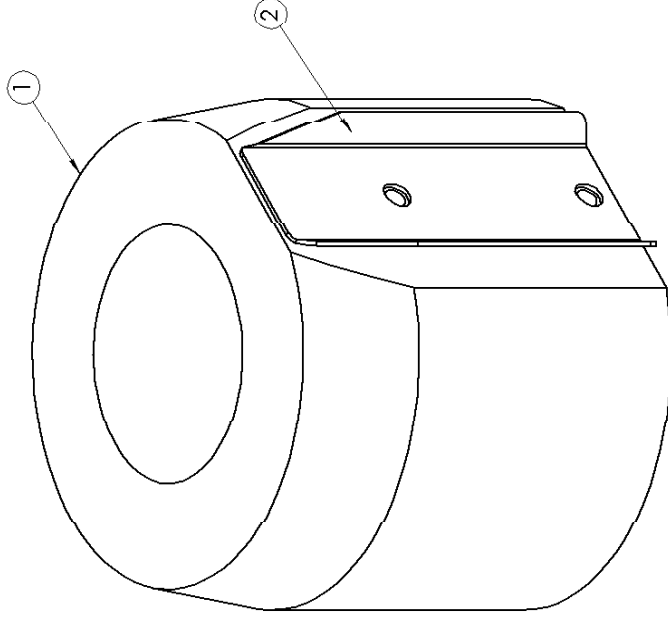
Item	Location	Part No.	Description	Qty.
1		4-0408-1-1-*	BEARING HUB	1
2		V-BRG-RBZ	1/2" BEAFING (CBC)	2

TRONICS	REEL CORE ASSEMBLY (4-B325*-1-*)	SECTION	5.1.2
		SHEET	1



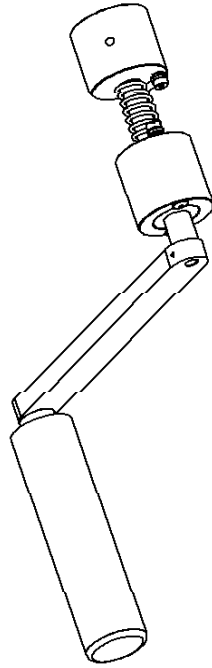
VARIANT	REEL CORE LENGTH
4-B325-1-1-*	65 MM
4-B325-2-1-*	14 MM

TRONICS	REEL CORE ASSEMBLY (4-B325*-1-*)	SECTION	5.1.2
		SHEET	2



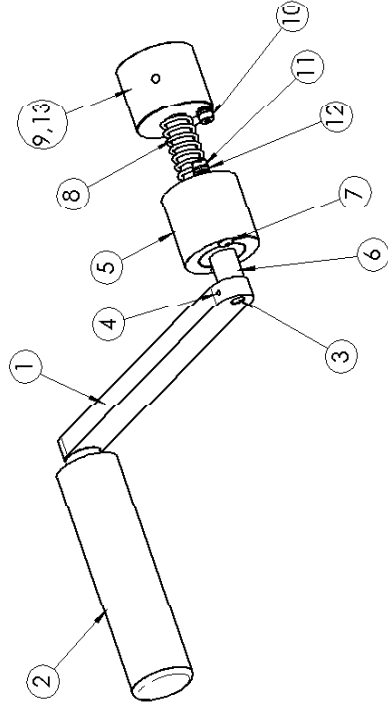
Item	Location	Part No.	Description	Qty.
1		4-7734-1-1-*	REEL CORE (65 MM LONG)	1
		4-7734-2-1-*	REEL CORE (14 MM LONG)	1
2		4-B324-1-1-*	STOPPER PLATE (FOR 65 MM REEL CORE)	1
		4-B324-2-1-*	STOPPER PLATE (FOR 14 MM REEL CORE)	1

TRONICS	DANCING ARM SUB ASSY (4-0693*-1-*)	SECTION	5.2
		SHEET	1



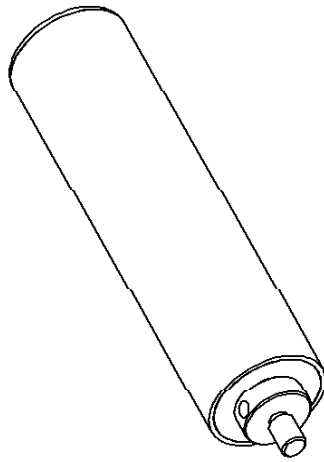
VARIANT		DETAILS	
4-0693-1-1-*	DANCING ARM SUB ASSY - LHS (115MM LABEL HEAD)		
4-0693-2-1-*	DANCING ARM SUB ASSY - LHS (215MM LABEL HEAD)		
4-0693-3-1-*	DANCING ARM SUB ASSY - LHS (265MM LABEL HEAD)		
4-0693-4-1-*	DANCING ARM SUB ASSY - RHS (115MM LABEL HEAD)		
4-0693-5-1-*	DANCING ARM SUB ASSY - RHS (215MM LABEL HEAD)		
4-0693-6-1-*	DANCING ARM SUB ASSY - RHS (265MM LABEL HEAD)		

TRONICS	DANCING ARM SUB ASSY (4-0693*-1-*)	SECTION	5.2
		SHEET	2



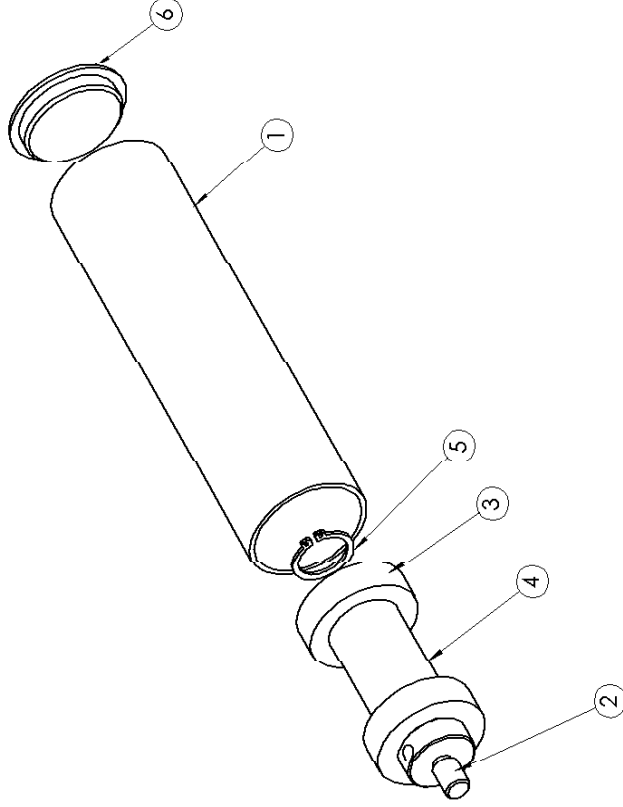
Item	Location	Part No.	Description	Qty.
1		4-B289-1-1-*	DANCING ARM	1
2	SECTION - 5.2.1	4-7997*-1-*	DANCING ARM ROLLER ASSY	1
3		4-0414-1-1-*	TENSION SHAFT	1
4		V-SPN-SPM030020DSF02	SPR. PIN DIA3x20-SPM030020CSF02 (CBC)	1
5	SECTION - 5.1.1	4-0661-1-1-*	DANCING ARM BRG HUB ASSY	1
6		P-0693-1-1-*	OD16 / ID13 X 18MM LONG ALUMINIUM TUBE	1
7		V-BCS-M5x20	BUTTON HEAD CAF SCREW - M5x20	2
8		4-0425-1-1-*	DANCER ARM TORSION SPRING (LEFT)	1
9		4-0425-2-1-*	DANCER ARM TORSION SPRING (RIGHT)	1
10		4-0399-1-1-*	TENSION NUT	1
11		V-SCS-M5x.5	SOCKET HEAD CAP SCREW - M5x15	2
12		V-SPW-M5	SPRING WASHER M5	2
13		V-WSH-M5	WASHER FLAT M5	2
		V-GSC-M6x10	GRUB SCREW M6x10	1

TRONICS	DANCING ARM ROLLER ASSY (4-7997-*-1-*)	SECTION	5.2.1
		SHEET	1



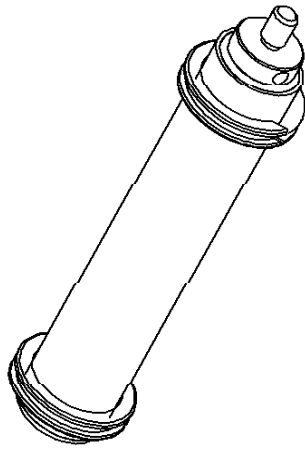
VARIANT	DETAILS
4-7997-1-1-*	DANCING ARM ROLLER ASSY (115 MM LABEL HEAD)
4-7997-2-1-*	DANCING ARM ROLLER ASSY (215 MM LABEL HEAD)
4-7997-3-1-*	DANCING ARM ROLLER ASSY (265 MM LABEL HEAD)

TRONICS	DANCING ARM ROLLER ASSY (4-7997-*-1-*)	SECTION	5.2.1
		SHEET	2



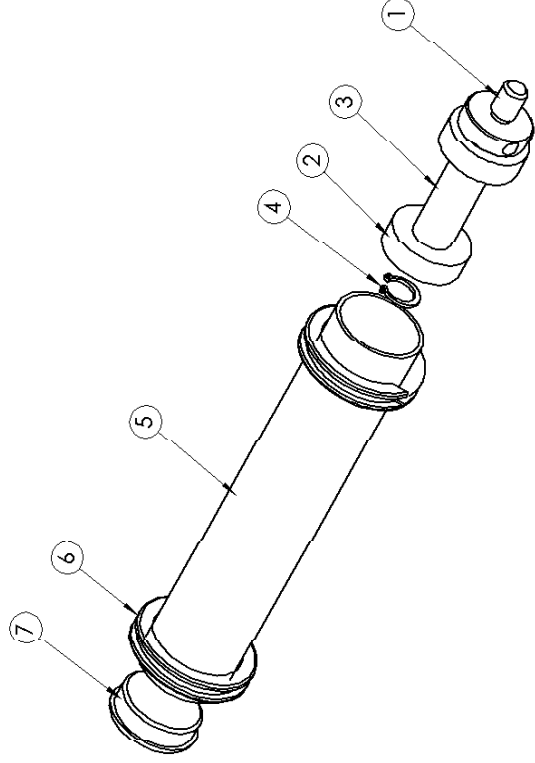
Item	Location	Part No.	Description	Qty.
1		4-8093-1-1-*	DANCING ARM ROLLER (115MM LABEL HEAD)	1
		4-8093-2-1-*	DANCING ARM ROLLER (215MM LABEL HEAD)	1
		4-8093-3-1-*	DANCING ARM ROLLER (265MM LABEL HEAD)	1
2		4-8003-1-1-*	DANCING ARM SHAFT	1
3		V-BRG-6003ZZ	S ROW DEEF G BALL B -6003ZZ (NSK-CBC)	2
4		P-7997-1-1-*	SS PIPE SCHEDULE 10 X 39MM LONG	1
5		V-CLP-D1400_0170	EXTERNAL CIRCLIP - D1400.01700 (CBC)	1
6		V-MIS-2135	DANCING ARM ROLLER DAP - 2135 (SMC)	1

TRONICS	GUIDE ROLLER ASSY (4-7996.*-1-*)		SECTION	5.3
			SHEET	1



VARIANT	DETAILS
4-7996-1-1-*	GUIDE ROLLER ASSY (115MM LABEL HEAD)
4-7996-2-1-*	GUIDE ROLLER ASSY (215MM LABEL HEAD)
4-7996-3-1-*	GUIDE ROLLER ASSY (265MM LABEL HEAD)

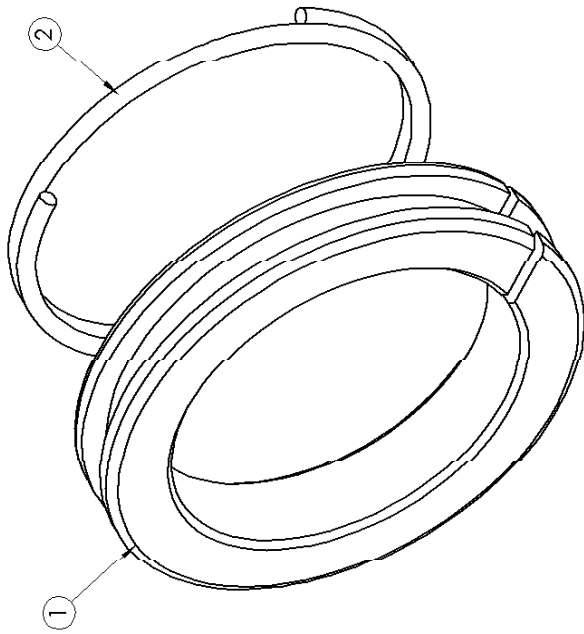
TRONICS	GUIDE ROLLER ASSY (4-7996.*-1-*)		SECTION	5.3
			SHEET	2



Item	Location	Part No.	Description	Qty.
1		4-8000-1-1-*	GUIDE ROLLER SHAFT	1
2		V-BRG-6000LB	S.ROW DEEP G.BALL B.-6000LB (NSK-CBC)	2
3		P-7996-1-1-*	CD12.7 / ID 10.5 X 34MM LONG ALUMINIUM TUBE	1
4		V-CLP-D1400_0100	EXTERNAL CIRCLIP METRIC-D1400 0100 (CBC)	1
5		4-8001-1-1-*	GUIDE ROLLER (115MM LABEL HEAD)	1
		4-8001-2-1-*	GUIDE ROLLER (215MM LABEL HEAD)	1
		4-8001-3-1-*	GUIDE ROLLER (265MM LABEL HEAD)	1
6	SECTION - 5.3.1	4-0474-1-1-*	LABEL GUIDE RING ASSY	2
7		V-MIS-2710	GUIDE ROLLER CAP - 2710 (HEYCO PLUG)	1

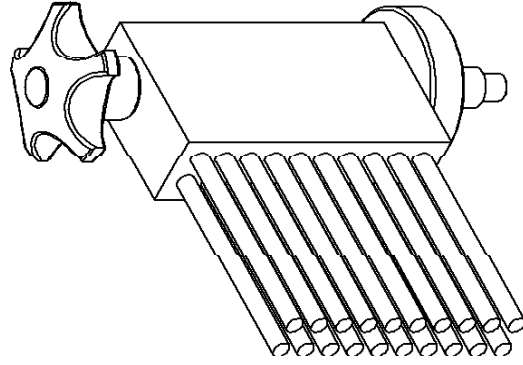
TRONICS	SECTION
	SHEET

TRONICS	LABEL GUIDE RING ASSY (4-0474-1-1-*)	SECTION	5.3.1
		SHEET	1



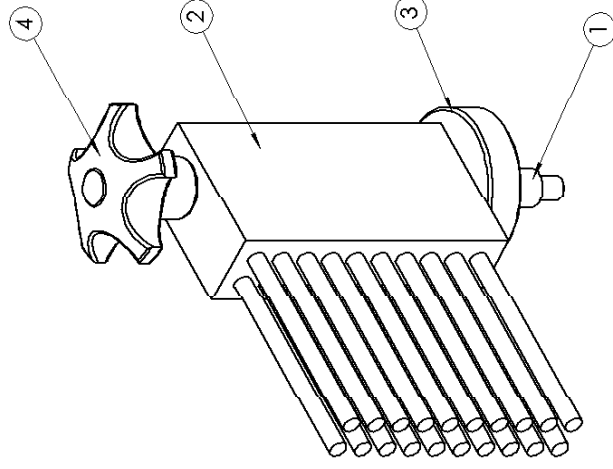
Item	Location	Part No.	Description	Qty.
1		4-0098-1-1-*	GUIDE RING	1
2		4-0441-1-1-*	LABEL GUIDE RING SPRING	1

TRONICS	PRESSURE BRUSH SUB ASSY (4-1192-*-1-*)	SECTION	5.4
		SHEET	1



VARIANT	DETAILS
4-1192-1-1-*	FOR 115 MM LABEL HEADASSY
4-1192-2-1-*	FOR 215 MM LABEL HEADASSY
4-1192-3-1-*	FOR 265 MM LABEL HEADASSY

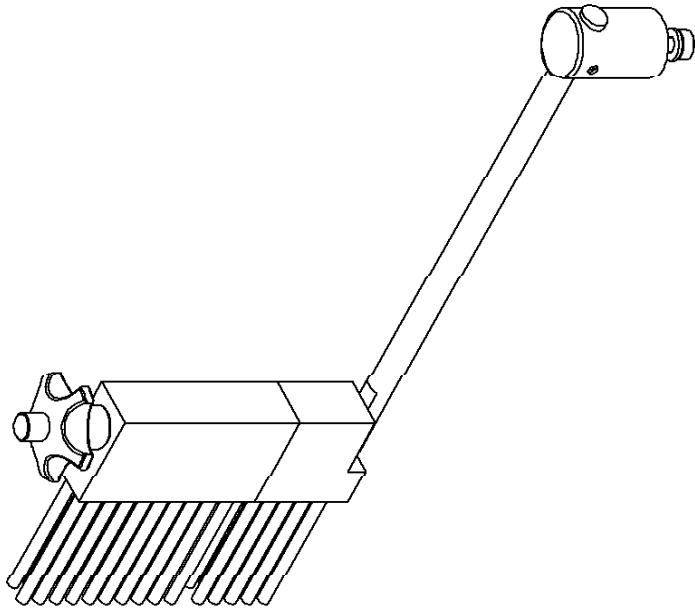
TRONICS	PRESSURE BRUSH SUB ASSY (4-1192-*-1-*)	SECTION	5.4
		SHEET	2



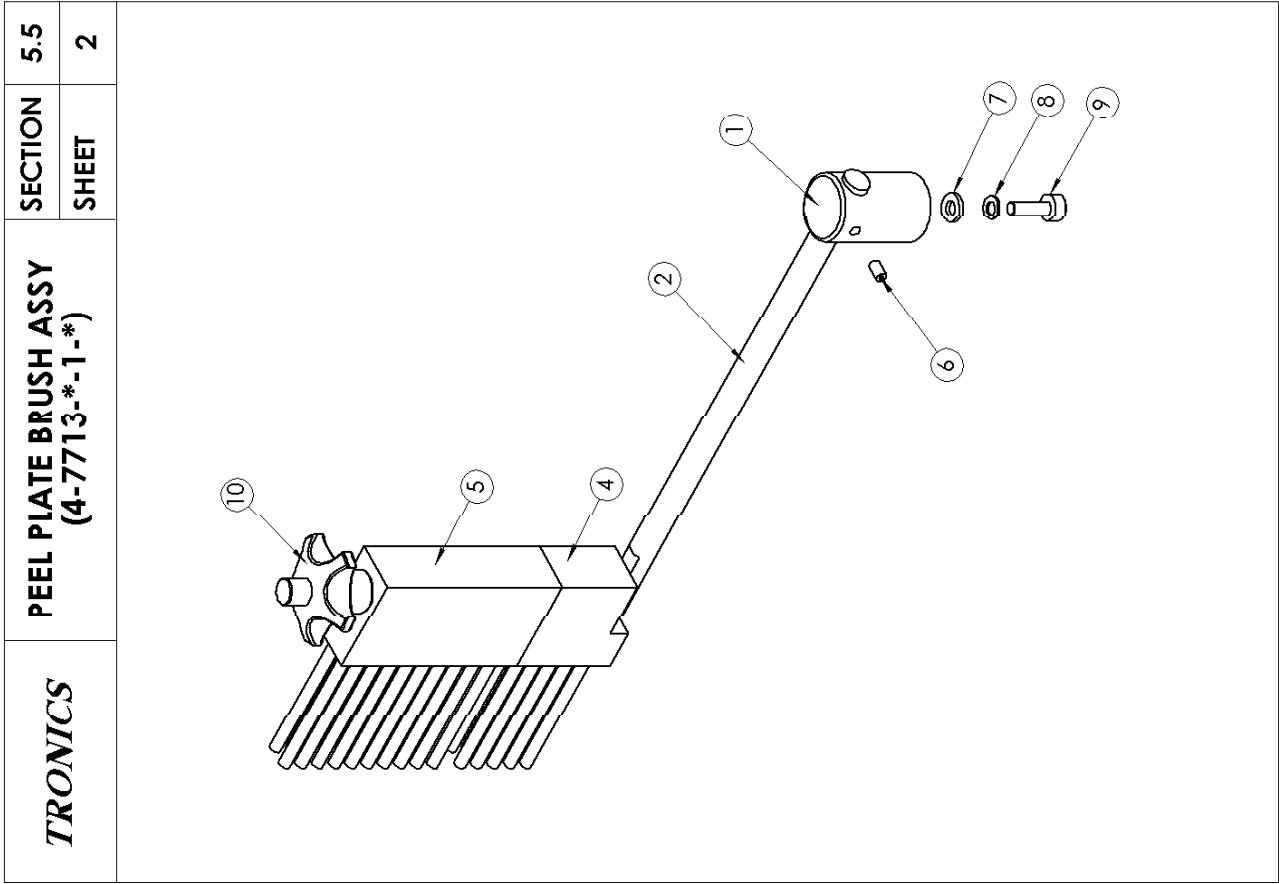
Item	Location	Part No.	Description	Qty.
1		4-1105-1-1-*	PRESSURE BRUSH SHAFT (115 MM)	1
		4-1105-2-1-*	PRESSURE BRUSH SHAFT (215 MM)	1
		4-1105-3-1-*	PRESSURE BRUSH SHAFT (265 MM)	1
2		4-7715-2-1-*	PRESSURE BRUSH ASSY (100 MM)	1
3		4-0396-1-1-*	PRESSURE BRUSH NUT	1
4		V-KNB-69958-M12	KNOB -69958-M12 (ELESA)	1

TRONICS	SECTION	
	SHEET	

TRONICS	PEEL PLATE BRUSH ASSY (4-7713.*-1-*)	SECTION	5.5
		SHEET	1



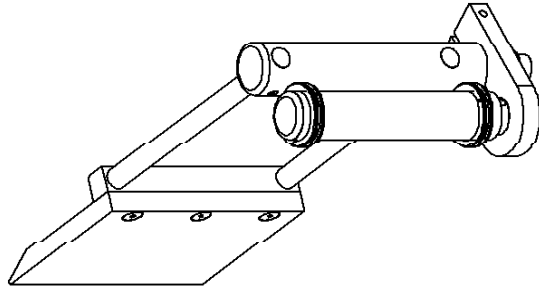
VARIANT	DETAILS
4-7713-1-1-*	FOR 115MM LABEL HEAC ASSY
4-7713-2-1-*	FOR 215MM LABEL HEAC ASSY
4-7713-3-1-*	FOR 265MM LABEL HEAC ASSY



TRONICS	PEEL PLATE BRUSH ASSY (4-7713-*-1-*)		SECTION 5.5
			SHEET 3

Item	Location	Part No.	Description	Qty.
1		4-0527-1-1*	VERTICAL TENSION GUIDE	1
2		4-7716-2-1*	BRUSH MOUNTING ARM(270MM)	1
3		4-7717-2-1*	BRUSH VERTICAL BAR (115 MM)	1
		4-7717-4-1*	BRUSH VERTICAL BAR (215 MM)	1
		4-7717-5-1*	BRUSH VERTICAL BAR (265 MM)	1
4		4-7715-1-1*	PRESSURE BRUSH ASSY (50 MM)	1
5		4-7715-2-1*	PRESSURE BRUSH ASSY (100 MM)	1
6		V-GSC-M5x8	GRUB SCREW M5x8	1
7		V-WSH-M6	WASHER FLAT M6	1
8		V-SPW-M6	SPRING WASHER M6	1
9		V-SCS-M6x20	SOCKET HEAD CAP SCREW - M6x20	1
10		V-KNB-69958-M12	KNOB -69958-M12 (ELESA)	1

TRONICS	LABEL HEAD PEEL PLATE ASSY (4-8005-*-1-*)	SECTION	5.6
		SHEET	1



VARIANT	DETAILS
4-8005-2-1-*	LA BEL HEAD PEEL PLATE ASSY - RHS (115 MM)
4-8005-4-1-*	LA BEL HEAD PEEL PLATE ASSY - RHS (215 MM)
4-8005-5-1-*	LA BEL HEAD PEEL PLATE ASSY - RHS (265 MM)
4-8005-7-1-*	LA BEL HEAD PEEL PLATE ASSY - LHS (115 MM)
4-8005-9-1-*	LA BEL HEAD PEEL PLATE ASSY - LHS (215 MM)
4-8005-A-1-*	LA BEL HEAD PEEL PLATE ASSY - LHS (265 MM)

TRONICS	SECTION	
	SHEET	

TRONICS

**LABEL HEAD PEEL
PLATE ASSY
(4-8005-*-1-*)**

SECTION
SHEET

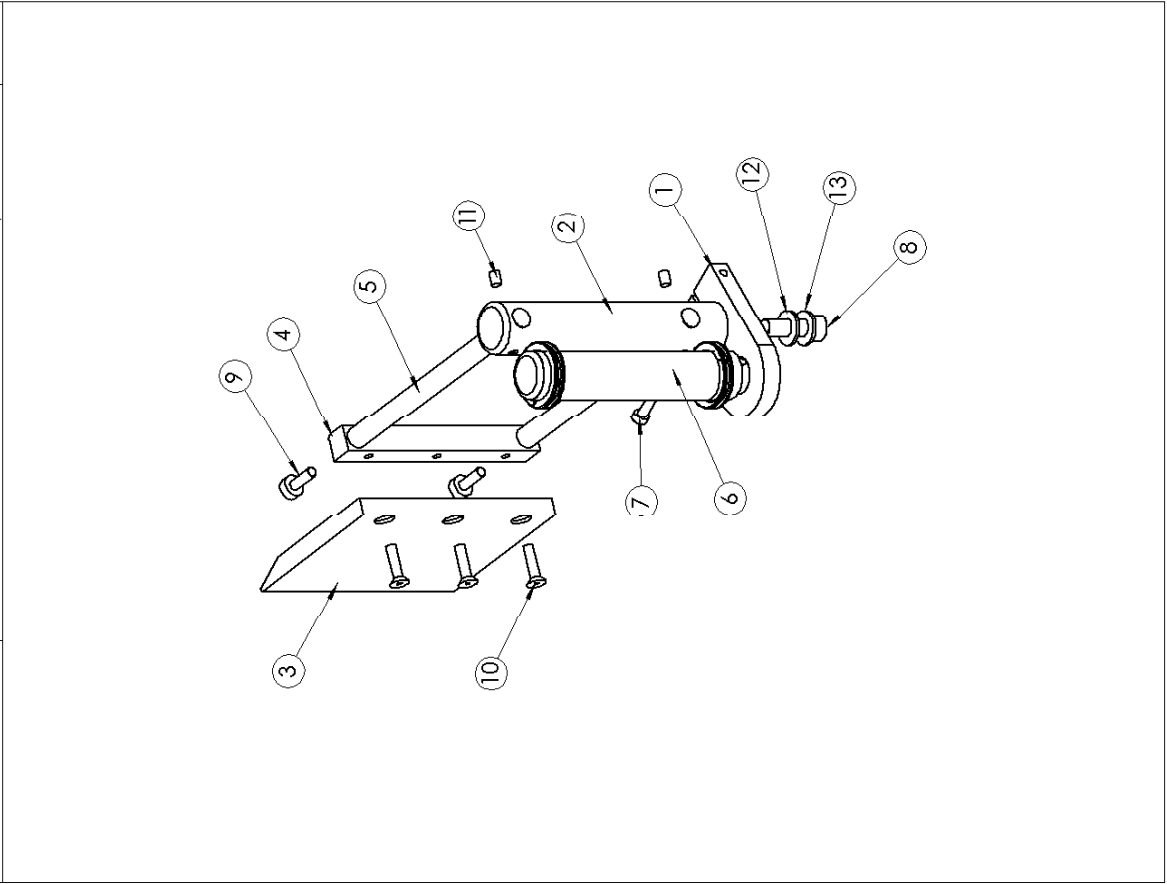
5.6
2

TRONICS

**LABEL HEAD PEEL
PLATE ASSY
(4-8005-*-1-*)**

SECTION
SHEET

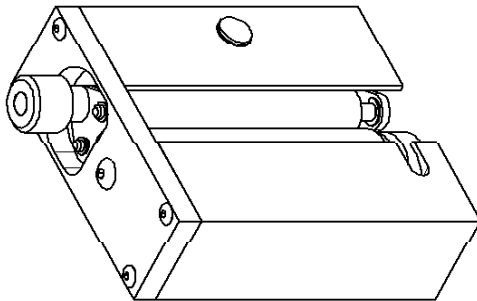
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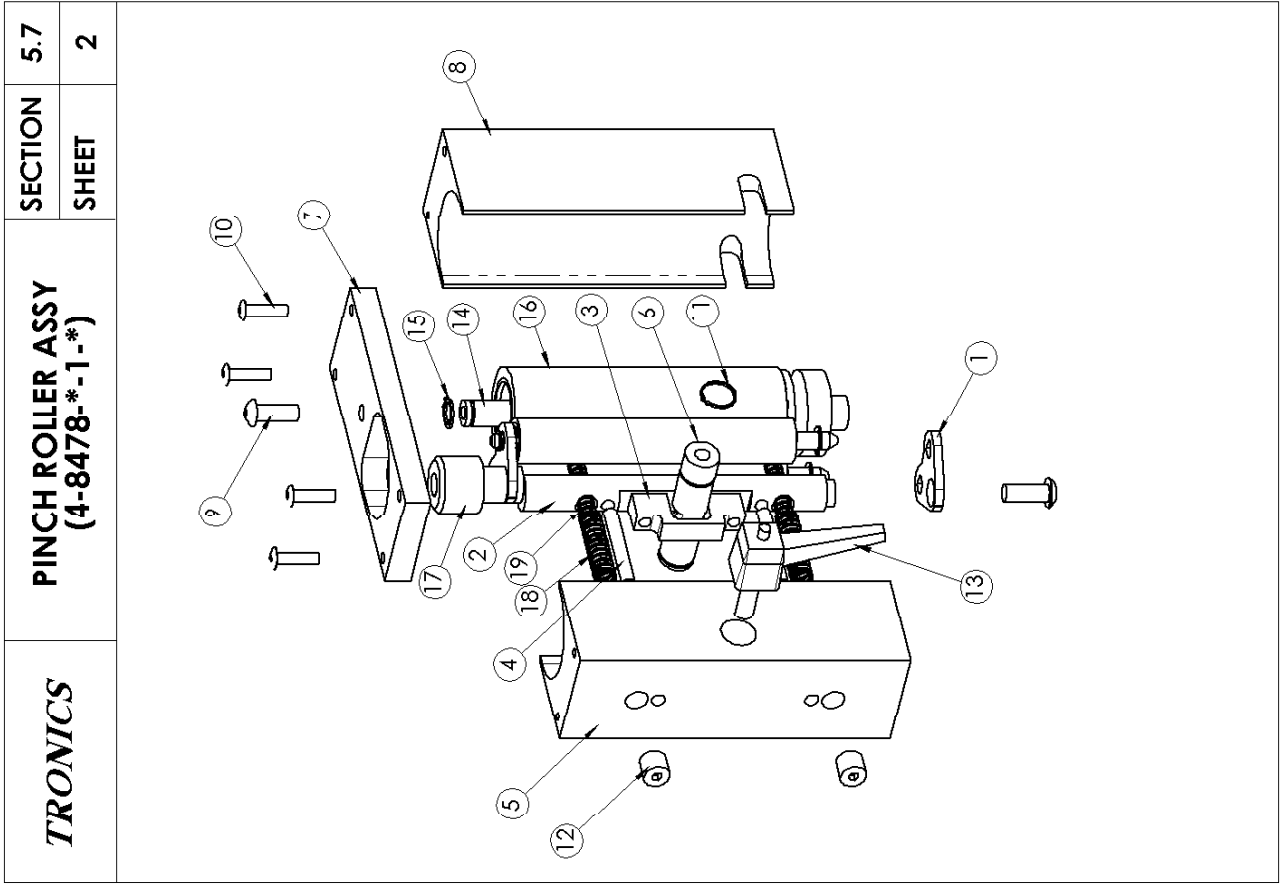
Item	Location	Part No.	Description	Qty.
1		4-0177-1-1*	SWIVEL ALIGNED BLOCK	1
2		4-7257-2-1*	PEEL PLATE VERTICAL SHAFT (115 MM)	1
		4-7257-4-1*	PEEL PLATE VERTICAL SHAFT (215 MM)	1
		4-7257-5-1*	PEEL PLATE VERTICAL SHAFT (265 MM)	1
3		4-7255-2-1*	LABEL HEAD PEEL PLATE (115 MM)	1
		4-7255-4-1*	LABEL HEAD PEEL PLATE (215 MM)	1
		4-7255-5-1*	LABEL HEAD PEEL PLATE (265 MM)	1
4		4-7256-2-1*	PEEL PLATE SQUARE BAF (115 MM)	1
		4-7256-4-1*	PEEL PLATE SQUARE BAF (215 MM)	1
		4-7256-5-1*	PEEL PLATE SQUARE BAF (265 MM)	1
5		4-1041-3-1*	HORIZONTAL PEEL PLATE BAR (185MM)	2
6	SECTION - 5.3	4-7996-*-1*	GUIDE ROLLER ASSY	1
7		V-SCS-M6x30	SOCKET HEAC CAP SCREW - M6x30	1
8		V-SCS-M10x30	SOCKET HEAC CAP SCREW - M10x30	1
9		V-SCS-M6x20	SOCKET HEAC CAP SCREW - M6x20	2
10		V-CSK-M6x20	COUNTERSUNK SCREW -M6x20	3
11		V-GSC-M6x8	GRUB SCREW/M6x8	4
12		V-WSH-M10	WASHER FLAT M10	1
13		V-SPW-M10	SPRING WASHER M10	1

TRONICS	SECTION	
	SHEET	

TRONICS	PINCH ROLLER ASSY (4-8478.*-1-*)	SECTION	5.7
		SHEET	1



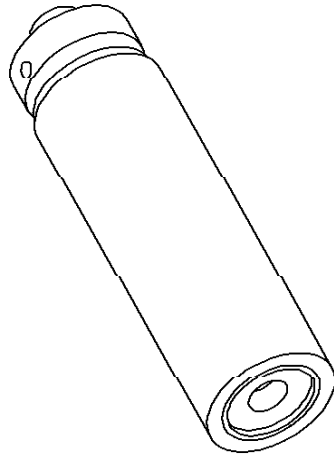
VARIANT	DETAILS
4-8478-1-1-*	PINCH ROLLER ASSEMBLY (115 MM)
4-8478-2-1-*	PINCH ROLLER ASSEMBLY (215 MM)
4-8478-3-1-*	PINCH ROLLER ASSEMBLY (265 MM)



TRONICS	PINCH ROLLER ASSY (4-8478*-1-*)		SECTION 5.7
			SHEET 3

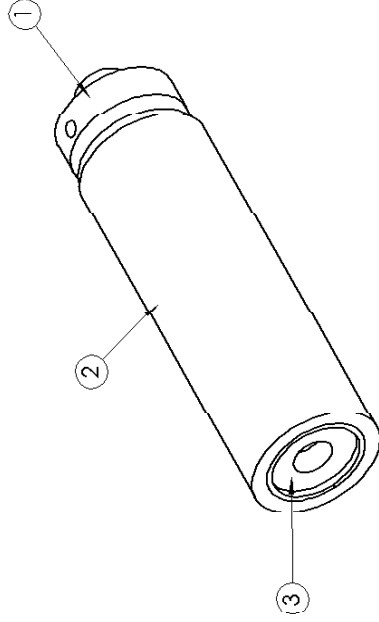
Item	Location	Part No.	Description	Qty.
1		4-B761-1-1-*	ROLLER SUPPORT PLATE	1
2		4-8481-1-1-*	MOUNTING SHAFT - 115 MM	1
		4-8481-2-1-*	MOUNTING SHAFT - 215 MM	1
		4-8481-3-1-*	MOUNTING SHAFT - 265 MM	1
3		4-8482-1-1-*	CAM BLOCK	1
4		V-PIN-6x46	DIA 6x46 LONG SS PIN	2
5		4-8483-1-1-*	SIDE BLOCK IDLE - 115 MM	1
		4-8483-2-1-*	SIDE BLOCK IDLE - 215 MM	1
		4-8483-3-1-*	SIDE BLOCK IDLE - 265 MM	1
6		4-8484-1-1-*	CAM	1
7		4-8485-1-1-*	TOP COVER	1
8		4-8486-1-1-*	SIDE BLOCK DRIVE - 115 MM	1
		4-8486-2-1-*	SIDE BLOCK DRIVE - 215 MM	1
		4-8486-3-1-*	SIDE BLOCK DRIVE - 265 MM	1
9		V-BCS-M8x20	BUTTON HEAD CAP SCREW - M8x20	2
10		V-BCS-M5x20	BUTTON HEAD CAP SCREW - M5x20	4
11		V-CLP-D1400_0160	EXTERNAL CIRCLIP METRIC-D1400 0160 (CBC)	2
12		V-GSC-M12x10	GRUB SCREW M12x10	2
13		V-HLV-M8x25	RATCHET HANDLE LEVER-M8x25(RCS)	1
14		4-0695-1-1-*	RUBBER ROLLER SHAFT	1
15		V-CLP-D1400_0120	EXTERNAL CIRCLIP - D1400 0120(CBC)	1
16	SECTION - 5.7.1	4-4005*-1-*	RUBBER ROLLER ASSEMBLY	1
17	SECTION - 5.7.2	4-B750*-1-*	PINCH ROLLER IDLER ASSEMBLY	1
18		4-0395-1-1-*	COMPRESSION SPRING	2
19		4-B801-1-1-*	COMPRESSION SPRING	2

TRONICS	RUBBER ROLLER ASSY (4-4005*-1-*)	SECTION 5.7.1
		SHEET 1



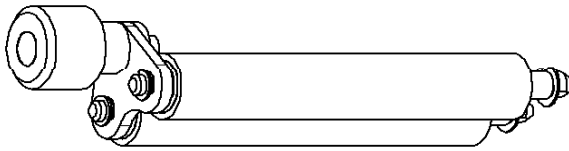
VARIANT	DETAILS
4-4005-1-1-*	RUBBER ROLLER ASSEMBLY (265)
4-4005-2-1-*	RUBBER ROLLER ASSEMBLY (215)
4-4005-3-1-*	RUBBER ROLLER ASSEMBLY (115)

TRONICS	RUBBER ROLLER ASSY (4-4005*-1-*)	SECTION 5.7.1
		SHEET 2



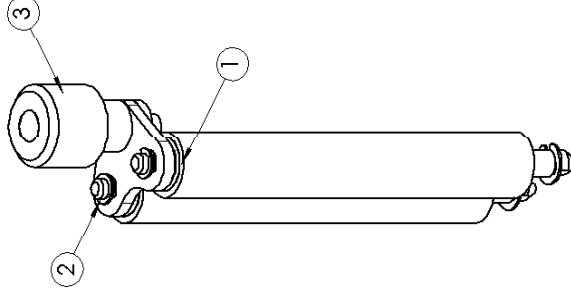
Item	Location	Part No.	Description	Qty.
1		4-0450-0-1-*	RUBBER ROLLER HUB	1
2		4-0580-3-1-*	DRIVE ROLLER - 115 MW	1
		4-0580-2-1-*	DRIVE ROLLER - 215 MW	1
		4-0580-1-1-*	DRIVE ROLLER - 265 MW	1
3		V-BRG-R8Z	1 1/2" BEARING (CBC)	1

TRONICS	PINCH ROLLER IDLER ASSY (4-B750.*-1-*)		SECTION	5.7.2
			SHEET	1



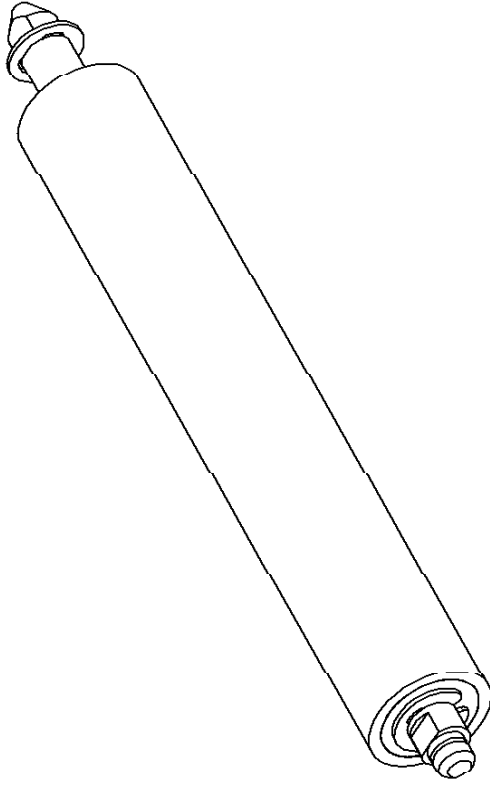
VARIANT	DETAILS
4-B750-1-1-*	PINCHROLLER IDLER ASSEMBLY (115)
4-B750-2-1-*	PINCHROLLER IDLER ASSEMBLY (215)
4-B750-3-1-*	PINCHROLLER IDLER ASSEMBLY (265)

TRONICS	PINCH ROLLER IDLER ASSY (4-B750.*-1-*)		SECTION	5.7.2
			SHEET	2



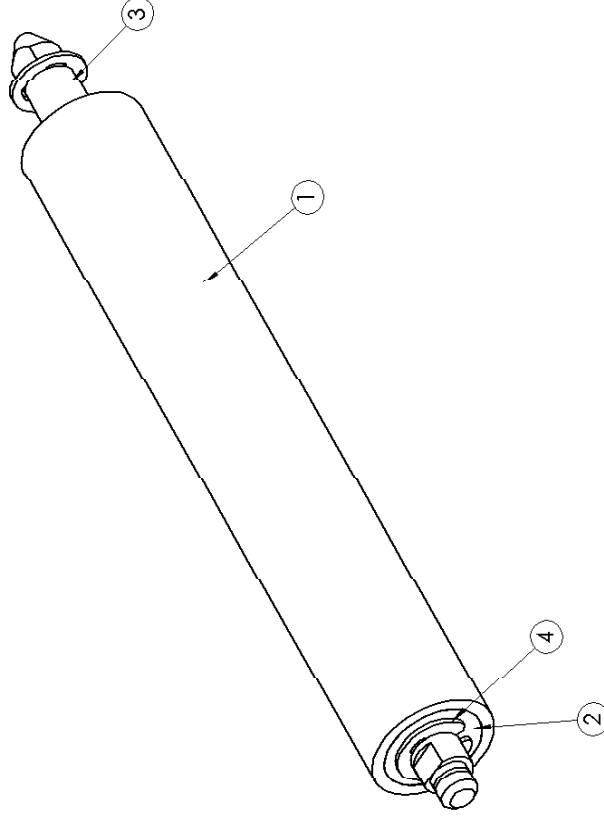
Item	Location	Part No.	Description	Qty.
1	SECTION - 5.7.2.1	4-B749-1-1-*	ROLLER ASSEMBLY	2
2	SECTION - 5.7.2.2	V-CLF-D1500 0040 KSF	EXTERNAL 'E' CIRCLIP D1500 0060 KSF	2
3	SECTION - 5.7.2.2	4-B857-1-1-*	CAPTIVE SCREW ASSY	1

TRONICS	ROLLER ASSEMBLY (4-B749.*-1-*)	SECTION 5.7.2.1
		SHEET 1



VARIANT	DETAILS
4-B749-1-1*	ROLLER ASSEMBLY (115)
4-B749-2-1*	ROLLER ASSEMBLY (215)
4-B749-3-1*	ROLLER ASSEMBLY (265)

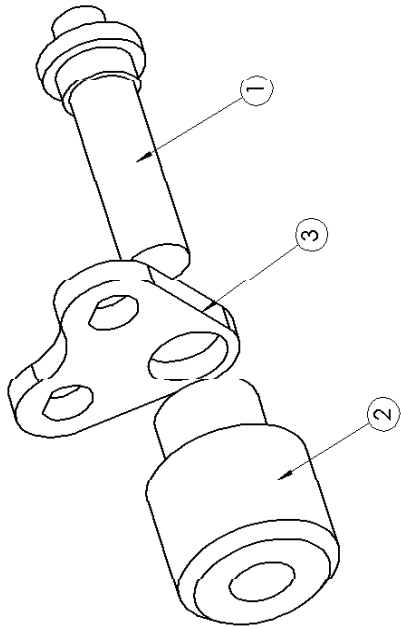
TRONICS	ROLLER ASSEMBLY (4-B749.*-1-*)	SECTION 5.7.2.1
		SHEET 2



Item	Location	Part No.	Description	Qty.
1		4-B746-1-1*	GUIDE ROLLER - 115 MM	1
		4-B746-2-1*	GUIDE ROLLER - 215 MM	1
		4-B746-3-1*	GUIDE ROLLER - 265 MM	1
2		V-BRG-MR688ZZ	BALL BEARING MR688ZZ	2
3		4-B747-1-1*	GUIDE ROLLER SI-AFT (115 MM)	1
		4-B747-2-1*	GUIDE ROLLER SI-AFT (215 MM)	1
		4-B747-3-1*	GUIDE ROLLER SI-AFT (265 MM)	1
4		V-CLP-D1500 0060 KS*	EXTERNAL 'E' CIRCLIP D1500 0060 KSF	3

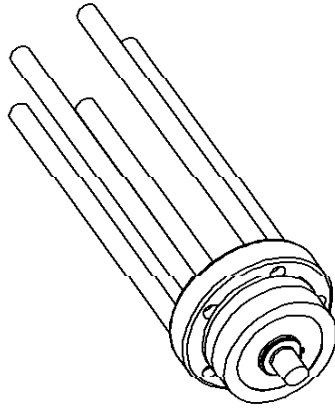
TRONICS	SECTION
	SHEET

TRONICS	CAPATIVE SCREW ASSY (4-B857-1-1-*)	SECTION	5.7.2.2
		SHEET	1



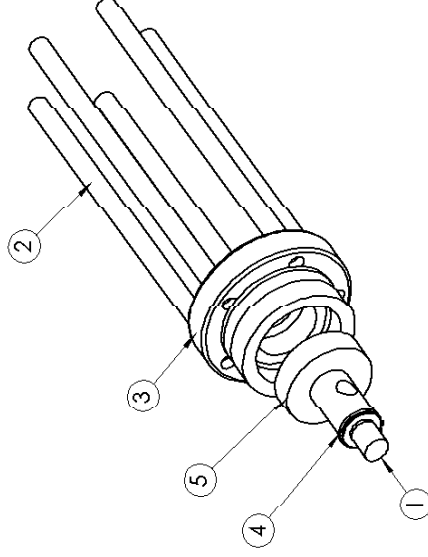
Item	Location	Part No.	Description	Qty.
1		4-8488-1-1-*	CAPTIVE SCREW BODY	1
2		4-8487-1-1-*	CAPTIVE SCREW KNOB	1
3		4-B761-1-1-*	ROLLER SUPPORT PLATE	1

TRONICS	TAKE UP REEL ASSY (4-0587-*-1-*)	SECTION	5.8
		SHEET	1



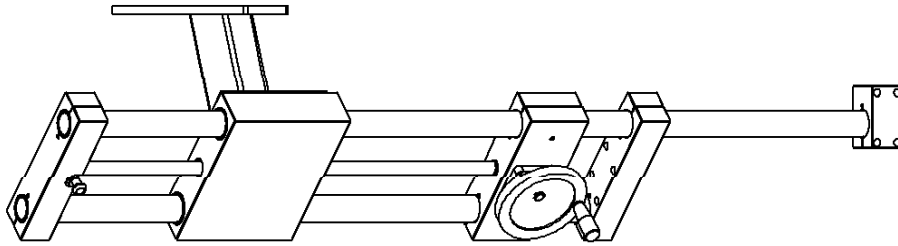
VARIANT	DETAILS
4-0587-1-1-*	TAKE UP REEL ASSY (115 MM)
4-0587-2-1-*	TAKE UP REEL ASSY (215 MM)
4-0587-3-1-*	TAKE UP REEL ASSY (265 MM)

TRONICS	TAKE UP REEL ASSY (4-0587-*-1-*)	SECTION	5.8
		SHEET	2



Item	Location	Part No.	Description	Qty.
1		4-B263-1-1-*	TAKE UP REEL SHAFT	1
2		4-B264-1-1-*	TAKE UP REEL ROD (FOR 115 MM ASSY)	5
		4-B264-2-1-*	TAKE UP REEL ROD (FOR 215 MM ASSY)	5
		4-B264-3-1-*	TAKE UP REEL ROD (FOR 265 MM ASSY)	5
3		4-B265-1-1-*	TAKE UP REEL HUB	1
4		V-CLP-N1400_0050	EXTERNAL C-RCRIP IMPERIAL-N1400 0050 (CBC)	2
5		V-BRG-R8Z	1.2" BEARING (CBC)	2

TRONICS	OVERHEAD MOUNTING ASSY (8-9708-*-1-*)	SECTION	7
		SHEET	1



VARIANT	DETAILS
8-9708-1-1-*	OVERHEAD MOUNTING ASSY (LH)
8-9708-2-1-*	OVERHEAD MOUNTING ASSY (RH)
8-9708-3-1-*	OVERHEAD MOUNTING ASSY EXTENDED (LH)
8-9708-4-1-*	OVERHEAD MOUNTING ASSY EXTENDED (RH)

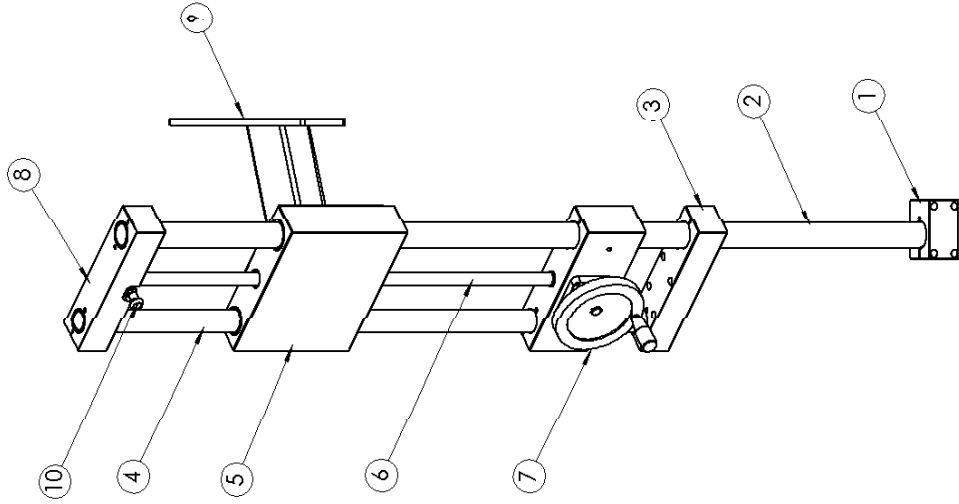
TRONICS	SECTION	
	SHEET	

TRONICS

**OVERHEAD MOUNTING
ASSY
(8-9708-*-1-*)**

SECTION
SHEET

7
2



TRONICS

**OVERHEAD MOUNTING
ASSY
(8-9708-*-1-*)**

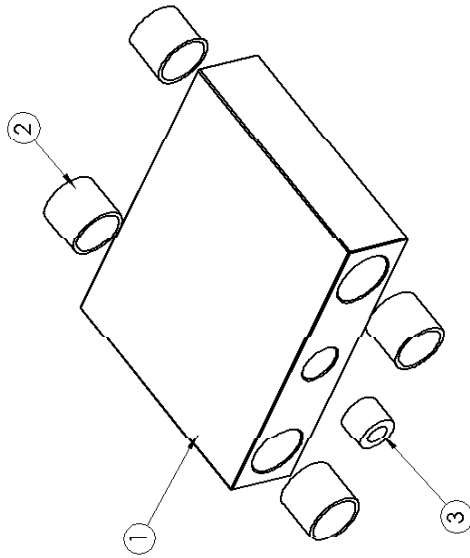
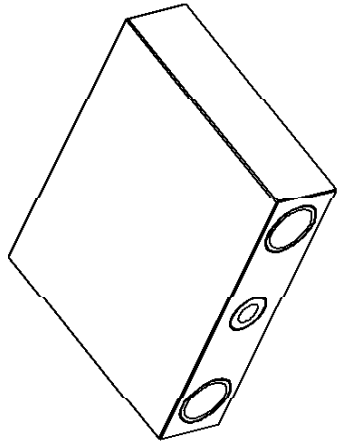
SECTION
SHEET

7
3

Item	Location	Part No.	Description	Qty.
1		89709-1-1-*	OVERHEAD LOWER MOUNT	1
2		P-9708-1-1-*	DIA 38.1 OD X DIA 31.7 ID X 1424MM SS TUBE	1
3		P-9708-3-1-*	DIA 38.1 OD X DIA 31.7 ID X 1524MM SS TUBE	1
4		89711-1-1-*	OVERHEAD UPPER MOUNT	1
5		P-9708-2-1-*	DIA 38.1 OD X DIA31.7 ID X 1017.5MM SS TUBE	1
6		P-9708-3-2-*	DIA 38.1 OD X DIA31.7 ID X 1117.5MM SS TUBE	1
7	SECTION - 7.1	89713-1-1-*	OVERHEAD SLIDE ASSEMBLY	1
8	SECTION - 7.2	89715-1-1-*	OVERHEAD SCREW THREAD (SHDRT)	1
9	SECTION - 7.3	89716-1-1-*	OVERHEAD MID CLAMP ASSY	1
10		89722-1-1-*	OVERHEAD UPPER CLAMP ASSY	1
		89724-1-1-*	OVERHEAD CONVEYOR MOUNT ASSY	1
		V-LTC-GN617.1-5-AK-NI	INDEXING PLUNGER - GN617.1-5-AK-NI	1

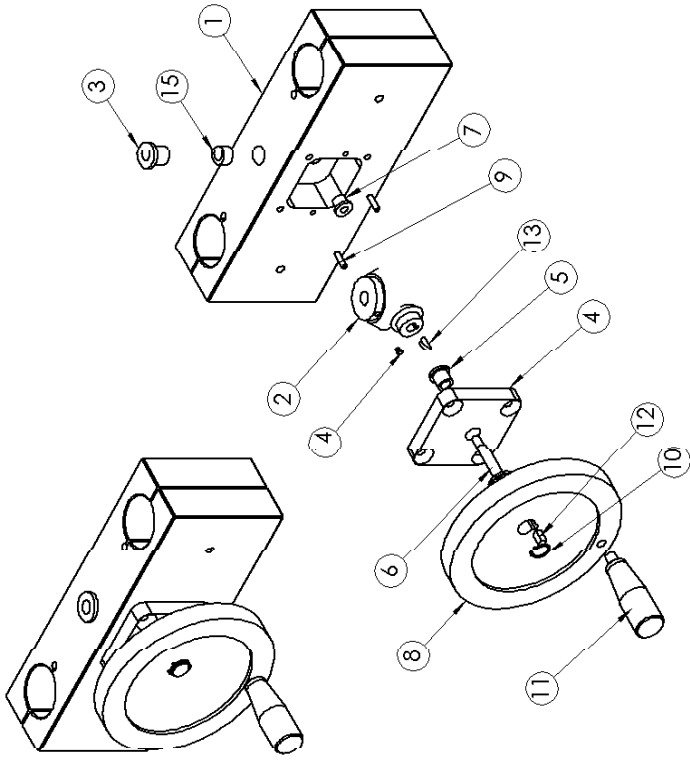
TRONICS	SECTION	
	SHEET	

TRONICS	OVERHEAD SLIDE ASSY (8-9713-1-1-*)	SECTION	7.1
		SHEET	1



Item	Location	Part No.	Description	Qty.
1		8-9712-1-1-*	OVERHEAD SLIDE	1
2		V-BSH-C4856-4	CYLINDRICAL BUSH -C4856-4 (SURELUBE)	4
3		8-A067-1-1-*	THREADED BUSH - M20	1

TRONICS	OVERHEAD MID CLAMP ASSY (8-9716-1-1-*)	SECTION	7.2
		SHEET	1



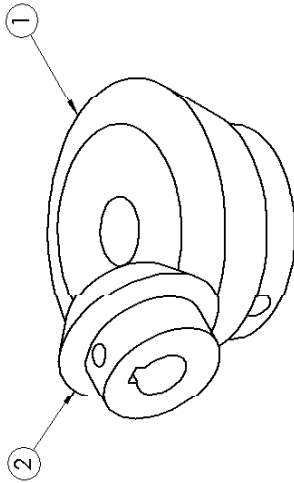
TRONICS	OVERHEAD MID CLAMP ASSY (8-9716-1-1-*)	SECTION	7.2
		SHEET	1

TRONICS		SECTION	
		SHEET	

Item	Location	Part No.	Description	Qty.
1		8-9717-1-1-*	OVERHEAD MID CLAMP	1
2	SECTION - 7.2.1	8-9718-1-1-*	OVERHEAD GEAR ASSY	1
3		V-BSH-SMF2216	FLANGED BUSH-SMF2216 (SURELUBE)	1
4		8-9719-1-1-*	OVERHEAD GEAR COVER	1
5		V-BSH-SMF1612	FLANGED BUSH-SMF1612 (SURELUBE)	1
6		8-9720-1-1-*	OVERHEAD GEAR SHAFT	1
7		V-BSH-SMF1410	FLANGED BUSH-SMF1410 (SURELUBE)	1
8		8-0062-0-1-*	HAND WHEEL	1
9		V-PIN-4x15	DIA 4x 5 LONG SS PIN	2
10		V-CLP-N1400_014#	EXTERNAL CIRCLIP IMPERIAL N1400 0140 (CBC)	1
11		V-GRF-WDS8154	REVOLVING GRIP -WDS 8154-203	1
12		V-KEY-5x5x10	KEY 5x5x10MM LONG	1
13		V-KEY-3x5	WOODRUFF KEY 3x5	1
14		V-GSC-DOG-M5x6	DOG GRUB SCREW M5x6	1
15		V-BSH-SMC101608	CYLINDRICAL BUSH-SMC101608 (SURELUBE)	1

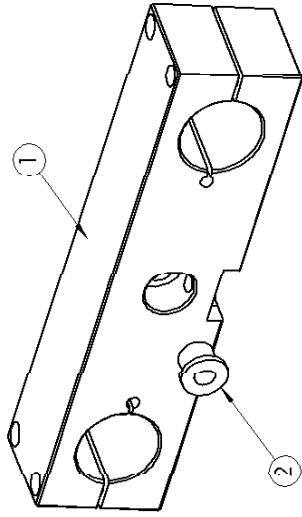
TRONICS	SECTION
	SHEET

TRONICS	OVERHEAD GEAR ASSY (8-9718-1-1-*)	SECTION	7.2.1
		SHEET	1



Item	Location	Part No.	Description	Qty.
1		8-9796-1-1-*	30T BEVEL GEAR	1
2		8-9795-1-1-*	15T BEVEL GEAR	1

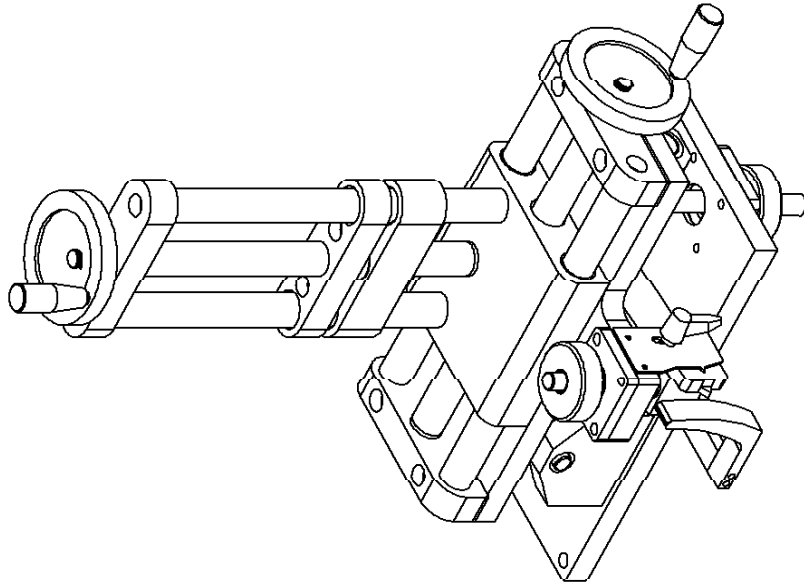
TRONICS	OVERHEAD UPPER CLAMP ASSY (8-9722-1-1-*)	SECTION	7.3
		SHEET	1



Item	Location	Par. No.	Description	Qty.
1		8-9723-1-1-*	OVERHEAD UPPER CLAMP	1
2		V-BSH-SMF2216	FLANGED BUSH-SMF2216 (SURELUBE)	1

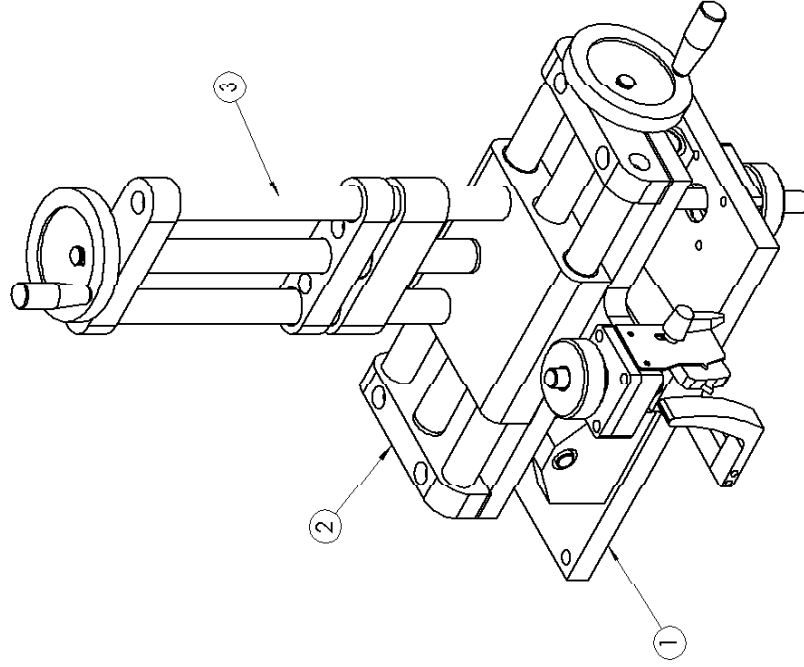
TRONICS	SECTION	
	SHEET	

TRONICS	LABEL HEAD MOUNTING ASSY (8-9832-*-1-*)		SECTION	8
			SHEET	1



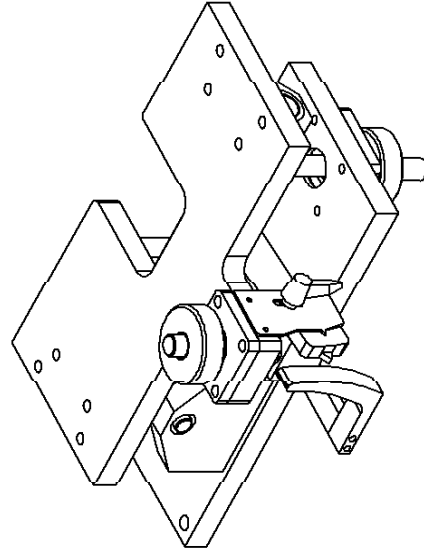
VARIANT	DETAILS
8-9832-1-1-*	LABEL HEAD MOUNTING ASSY (RH)
8-9832-2-1-*	LABEL HEAD MOUNTING ASSY (LH)

TRONICS	LABEL HEAD MOUNTING ASSY (8-9832-*-1-*)		SECTION	8
			SHEET	2



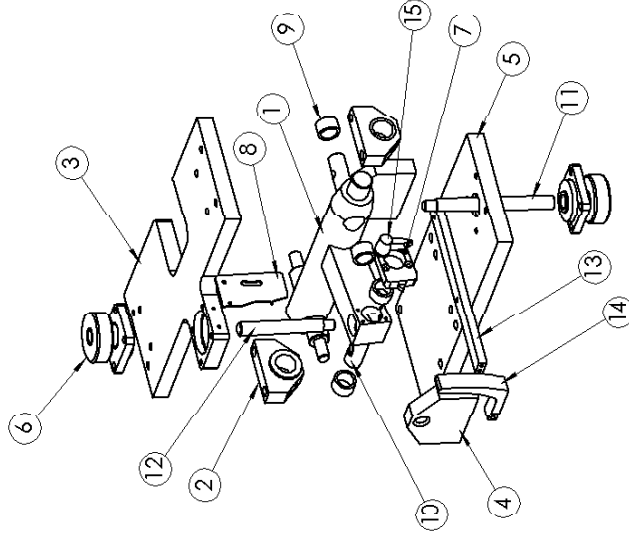
Item	Location	Part No.	Description	Qty.
1	SECTION - 8.1	4-A012-1-*	TILT ASSY	1
2	SECTION - 8.2	8-9833-1-*	HORIZONTAL SLIDE ASSY	1
3	SECTION - 8.3	8-7926-1-*	VERTICAL SLIDE ASSY (350MM)	1

TRONICS	TILT ASSEMBLY (4-A012*-1-*)		SECTION 8.1
			SHEET 1



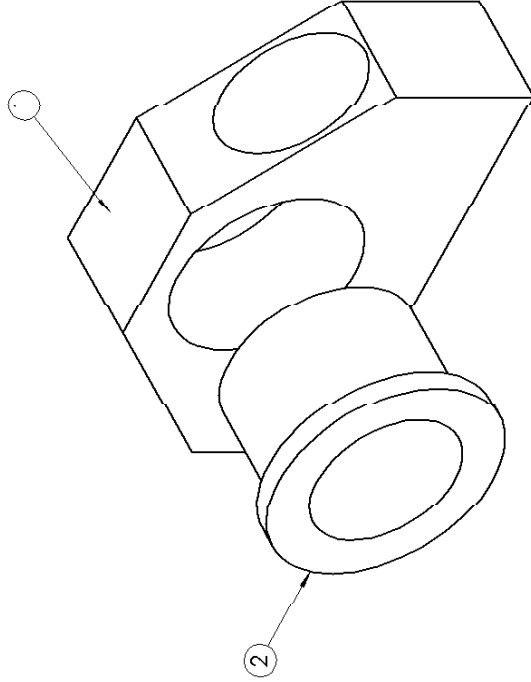
VARIANT	DETAILS
4-A012-1-1-*	TILT ASSEMBLY (RHS)
4-A012-2-1-*	TILT ASSEMBLY (LHS)

TRONICS	TILT ASSEMBLY (4-A012*-1-*)		SECTION 8.1
			SHEET 2



Item	Location	Part No.	Description	Qty.
1		4-A000-1-1-*	TILT - UNIVERSAL LINK - RHS	1
		4-A000-2-1-*	TILT - UNIVERSAL LINK - LHS	1
2	SECTION - 8.1.1	4-A009-1-1-*	BEARING BLOCK ASSY - TOP	2
3		4-A010-1-1-*	MOUNTING PLATE TCP - RHS	1
		4-A010-2-1-*	MOUNTING PLATE TCP - LHS	1
4	SECTION - 8.1.2	4-A006-1-1-*	BEARING BLOCK ASSY - BASE	2
5		4-A011-1-1-*	MOUNTING PLATE - BASE	1
6	SECTION - 8.1.3	4-A016-1-1-*	SCREW HANDLE ASSY	2
7		4-A023-1-1-*	TOP INDICATOR BLOC&K	1
8		4-A024-1-1-*	TOP ANGLE INDICATOR	1
9		V-BSH-SMC202615	CYLINDRICAL BUSH-SMC202615 .SURELUBE	4
10		4-A021-1-1-*	TOP PIN	2
11		4-A017-1-1-*	LONG ADJUSTMENT SCREW	1
12		4-A018-1-1-*	SHORT ADJUSTMENT SCREW	1
13		4-A026-1-1-*	INDICATOR ARM	1
14		4-9767-1-1-*	INDICATOR BLOCK	1
15		V-HLV-M6X10	RATCHETHANDLE LEVER - M6X10 (RCS)	1

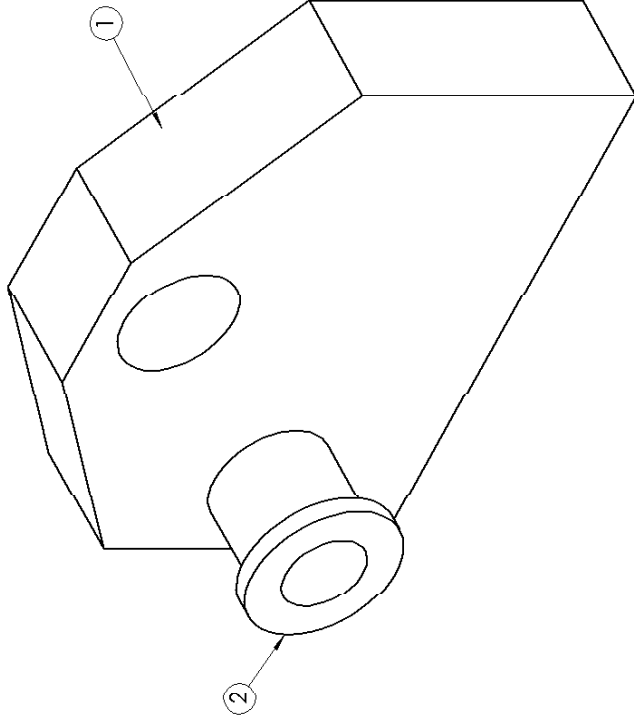
TRONICS	BEARING BLOCK ASSY - TOP (4-A009-1-1-*)	SECTION	8.1.1
		SHEET	1



Item	Location	Part No.	Description	Qty.
1		4-A008-1-1-*	BEARING BLOCK - TOP	1
2		V-BSH-SMF3925	FLANGED BUSH-SMF3925 (SURELUBE)	1

TRONICS	SECTION	
	SHEET	

TRONICS	BEARING BLOCK ASSY - BASE (4-A006-1-1-*)	SECTION	8.1.2
		SHEET	1



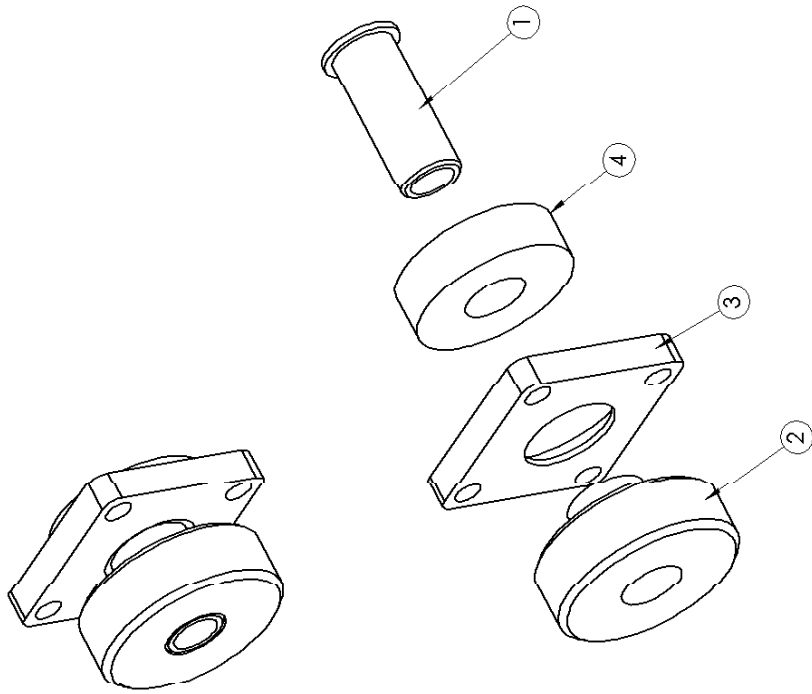
Item	Location	Part No.	Description	Qty.
1		4-A007-1-1-*	BEARING BLOCK - BASE	1
2		V-BSH-SMF2620	FLANGED BUSH-SMF2920 (SURELUBE)	1

TRONICS	SECTION
	SHEET

TRONICS	SECTION
	SHEET

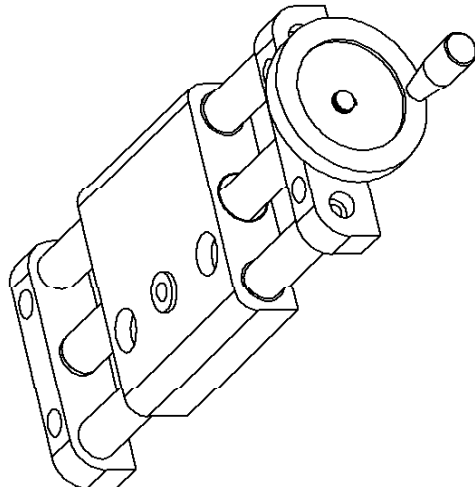
TRONICS	SECTION	8.1.3
	SHEET	1

**SCREEN HANDLE ASSY
(4-A016-1-1-*)**



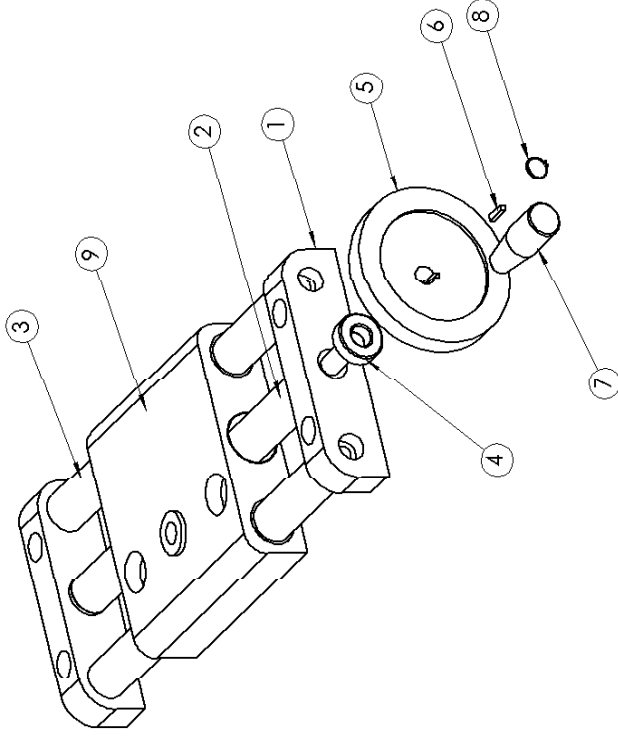
Item	Location	Part No.	Description	Qty.
1		4-A013-1-1-*	HANDLE INNER	1
2		4-A014-1-1-*	HANDLE OUTER	1
3		4-A015-1-1-*	BEARING PLATE	1
4		V-BRG-1304	SELF ALIGNING BEARING - 1304 (NSK-CBC)	1

TRONICS	HORIZONTAL SLIDE ASSY (8-9833*-1-*)	SECTION	8.2
		SHEET	1



VARIANT	DETAILS
8-9333-1-1-*	HORIZONTAL SLIDE ASSY (LHS)
8-9333-2-1-*	HORIZONTAL SLIDE ASSY (RHS)

TRONICS	HORIZONTAL SLIDE ASSY (8-9833*-1-*)	SECTION	8.2
		SHEET	2



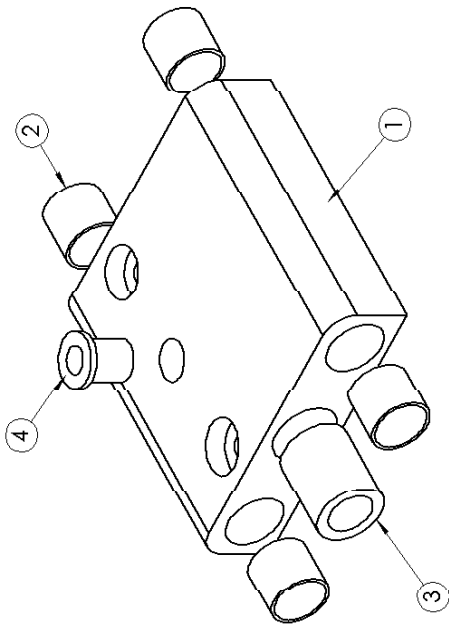
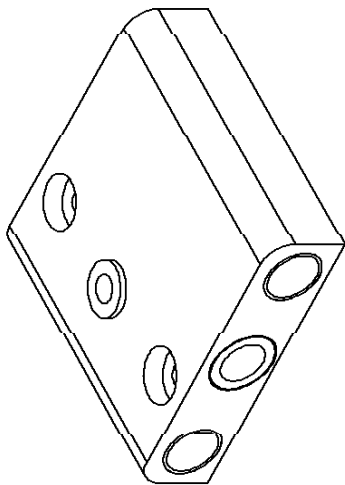
Item	Location	Part No.	Description	Qty.
1	SECTION - 8.2.1	8-4664-0-1-*	BASE END BLOCK SUB-ASSY	2
2		8-0776-1-1-*	ADJUSTMENT SCREW (350MM)	1
3		8-0764-1-1-*	HORIZONTAL GUIDE BAR (350MM)	2
4		8-2553-0-1-*	SPACER	1
5		8-9835-1-1-*	4" DISK HAND WHEEL	1
6		V-KEY-3_175x15	KEY 3.175x.5MM LONG	1
7		V-GRP-IM6	M6 REVOLVING GRIP	1
8		V-CLP-N1400_0050	EXTERNAL CIRCLIP IMPERIAL-N1400 0050 (CBC)	1
9	SECTION - 8.2.2	8-4663-0-1-*	MOVING BLOCK SUB-ASSY	1

TRONICS	BASE END BLOCK SUB ASSY (8-4664-0-1-*)	SECTION	8.2.1	
		SHEET	1	
Item	Location	Fart No.	Description	Qty.
1		8-0436-0-1-*	BASE END BLOCK	1
2		V-BSHF1624-2	FLANGED BUSH-F1624-2 (SURELU3E)	1

TRONICS	SECTION	
	SHEET	

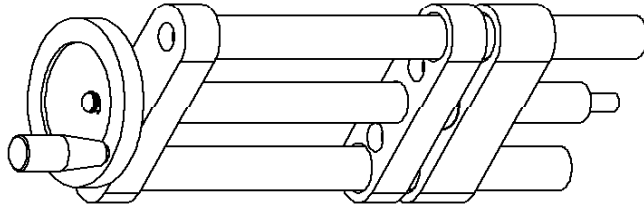
TRONICS	MOVING BLOCK SUB ASSY (8-4663-0-1-*)	SECTION	SECTION
		SHEET	SHEET

TRONICS	MOVING BLOCK SUB ASSY (8-4663-0-1-*)	SECTION	8.2.2
		SHEET	1



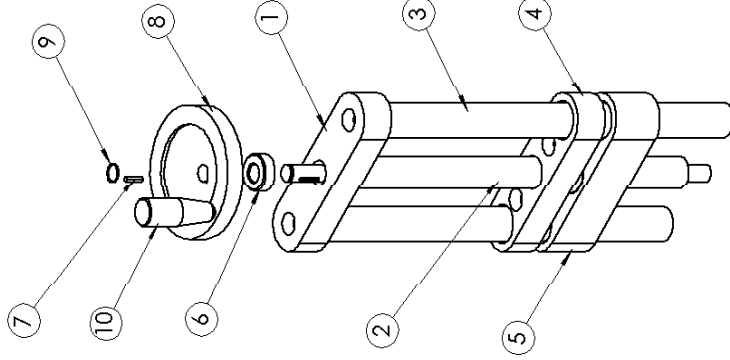
Item	Location	Par. No.	Description	Qty.
1		8-0278-0-1-*	MOVING BLOCK	1
2		V-BSH-C:236-4	CYLINDRICAL BUSH -C3236-4 (SURELUBE)	4
3		8-1464-0-1-*	NUT - BRONZE	1
4		V-BSH-F1624-2	FLANGED BUSH-F1624-2 (SURELUBE)	1

TRONICS	VERTICAL SLIDE ASSY (8-7926.*-1-*)		SECTION	8.3
			SHEET	1



VARIANT	DETAILS
8-7926-1-1-*	VERTICAL SLIDE ASSY (350 MM)
8-7926-2-1-*	VERTICAL SLIDE ASSY (400 MM)

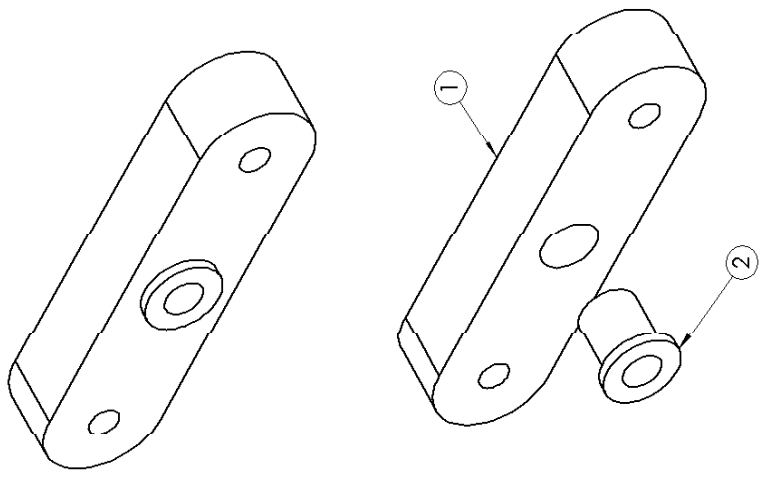
TRONICS	VERTICAL SLIDE ASSY (8-7926.*-1-*)		SECTION	8.3
			SHEET	2



Item	Location	Part No.	Description	Qty.
1	SECTION - 8.31	8-4665-0-1-*	TOP BLOCK SUB-ASSY	1
2		8-0776--1-*	ADJUSTMENT SCREW (350MM)	1
3		8-0776-2-1-*	ADJUSTMENT SCREW (400MM)	1
4		8-0774--1-*	VERTICAL GUIDE BAR (350MM)	2
5		8-0774-2-1-*	VERTICAL GUIDE BAR (400MM)	2
6	SECTION - 8.32	4-0640-0-1-*	BOTTOM BASE CLAMP	1
7		8-2553-0-1-*	BOTTOM BASE CLAMP SUB-ASSY	1
8		V-KEY-3_175x15	SPACER	1
9		8-9835--1-*	KEY 3.17x15MM LONG	1
10		V-CLP-N1400_0050	4" DISK HAND WHEEL	1
		V-GRP-M6	EXTERNAL CIRCLIP IMPERIAL-N1400 0050 (CBC)	1
			M6 REVOLVING GRIP	1

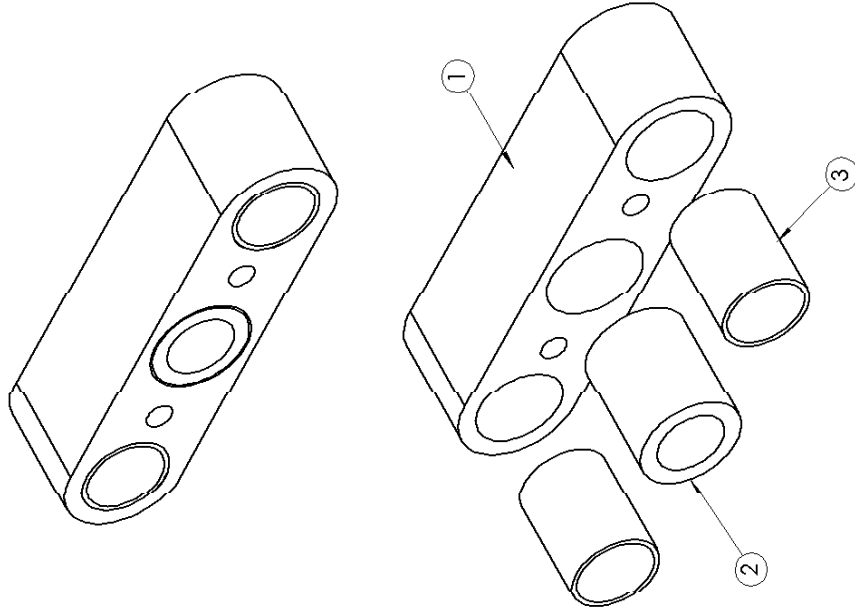
TRONICS		SECTION	
		SHEET	

TRONICS	TOP BLOCK SUB ASSY (8-4665-0-1-*)	SECTION	8.3.1
		SHEET	2



Item	Location	Part No.	Description	Qty.
1		8-0435-0-1-*	TOP BLOCK	1
2		V-BSHF1624-2	FLANGET BUSH-F1624-2 (SURELJBE)	1

TRONICS	BOTTOM BASE CLAMP ASSY (4-4661-0-1-*)	SECTION SHEET	8.3.2 1
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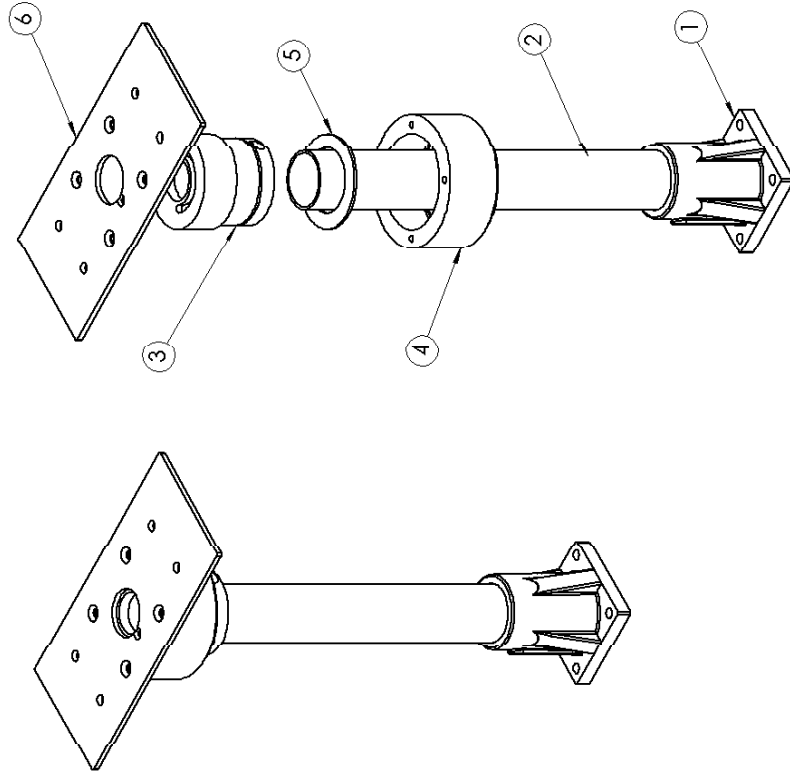


Item	Location	Pat No.	Description	Qty.
1		4-0641-0-1-*	BOTTOM BASE CLAMP	1
2		8-1464-0-1-*	NUT - BRONZE	1
3		V-BSH-C:3236-6	CYLINDRICAL BUSH -C3236-6 (SURELUBE)	2

TRONICS	SECTION SHEET
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TRONICS	SECTION
	SHEET

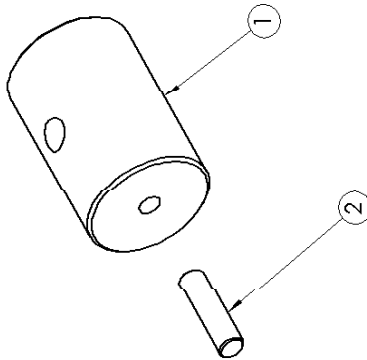
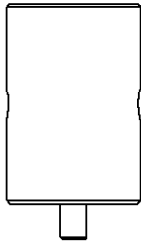
TRONICS	CONTROL BOX SUPPORT ASSY KIT (5-9865-1-1-*)		SECTION	10
			SHEET	1



Item	Location	Part No.	Description	Qty.
1		8-5268-0-1-*	CAST STAND	1
2		P-9865-1-1-*	SS PIPE DIA 60.32 X DIA 54.78 X585MM LONG	1
3		5-4800-0-1-*	CLAMP B.LOCK	1
4		5-4801-0-1-*	SWIVEL BLOCK	1
5		5-4802-0-1-*	WASHER	1
6		5-4803-0-1-*	CONTROL BOX SUPPORT PLATE	1

TRONICS	SECTION	
	SHEET	

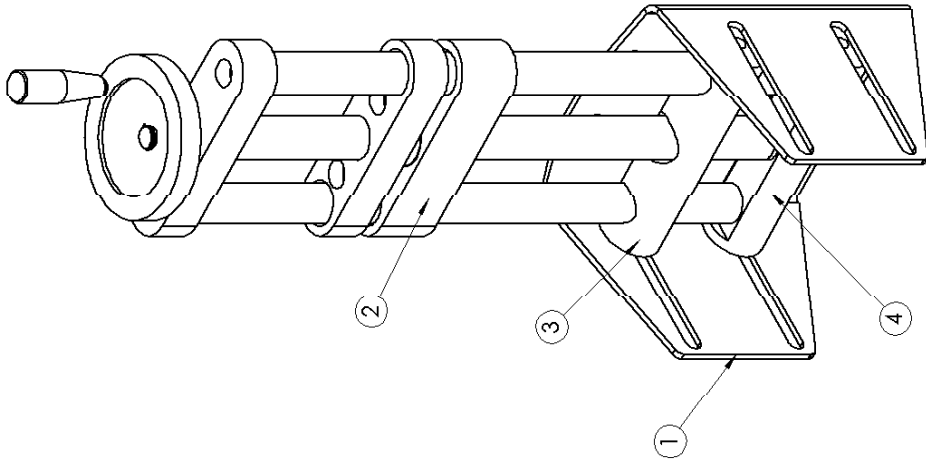
TRONICS	MOUNTING BAR ASSY (8-A093-1-1-*)	SECTION	11
		SHEET	1



Item	Location	Fart No.	Description	Qty.
1		8-A089-1-1-*	MOUNTING BAR 60MM	1
2		8-A092-1-1-*	M8 THREADED ROD	1

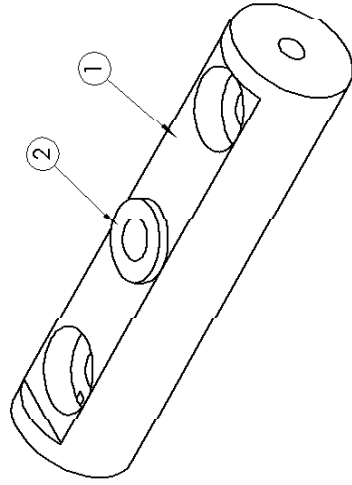
TRONICS	SECTION	
	SHEET	

TRONICS	WRAP SUPPORT ASSY (3-B563-1-1-*)	SECTION	12
		SHEET	1



Item	Location	Part No.	Description	Qty.
1		3-B558-1-1-*	MOUNTING PLATE	1
2	SECTION - 8.3	8-7926-2-1-*	VERTICAL SLIDE ASSY (400MM)	1
3		3-B559-1-1-*	SUPPORT ARM	1
4	SECTION - -2.1	8-B947-1-1-*	WRAP SWIVEL BAR ASSY.	1

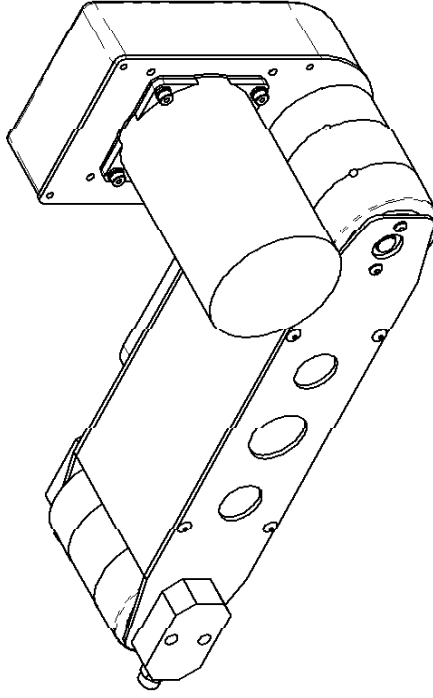
TRONICS	WRAP SWIVEL BAR ASSY (8-B947-1-1-*)	SECTION	12.1
		SHEET	1



Item	Location	Part No.	Description	Qty.
1		8-B946-1-1-*	WRAP SWIVEL BAR	1
2		V-BSHF1624-2	FLANGEE BUSH-F1624-2 (SUIRELJBE)	1

TRONICS	SECTION	
	SHEET	

TRONICS	WRAP CONVEYOR ASSY (3-6877*-1-*)	SECTION	13
		SHEET	1



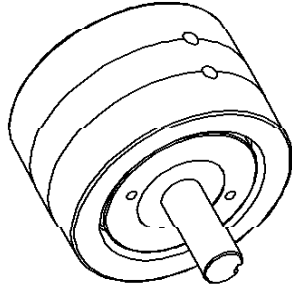
VARIANT	DETAILS
3-6877-2-1-*	WRAP CONVEYOR SUB ASSY - LHS (100 MM)
3-6877-4-1-*	WRAP CONVEYOR SUB ASSY - LHS (150 MM)
3-6877-8-1-*	WRAP CONVEYOR SUB ASSY - RHS (100MM)
3-6877-A-1-*	WRAP CONVEYOR SUB ASSY - RHS (150MM)

TRONICS	SECTION	
	SHEET	

TRONICS	WRAP CONVEYOR ASSY (3-6877*-1-*)	SECTION	13
		SHEET	2

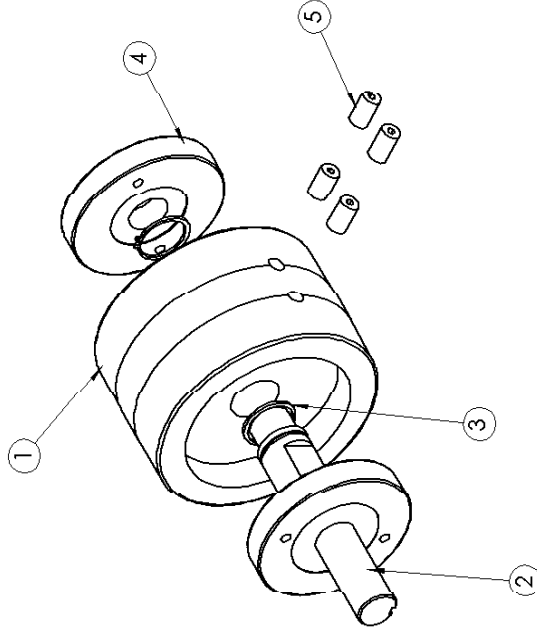
TRONICS	WRAP CONVEYOR ASSY (3-6877*-1-*)	SECTION	13	
		SHEET	3	
Item	Location	Part No.	Description	Qty.
1		3-6878-1-1-*	WRAP TOP PANEL	1
2		3-6879-1-1-*	WRAP BASE PANEL	1
3		3-0349-2-1-*	SPACER PLATE (100 MM)	2
		3-0349-4-1-*	SPACER PLATE (160 MM)	2
4	SECTION - 13.1	3-0927*-1-*	DRIVING ROLLER ASSY, 100 MM	1
5		3-0859-1-1-*	1/8" SQUARE KEY	1
6		3-2172-1-1-*	DRIVING GEAR COVER	1
7		3-3489-1-1-*	BELT TENSIGNER	2
8	SECTION - 13.2	3-3005*-1-*	DRIVEN ROLLER ASSY (100 MM)	1
9		V-SCS-0007	SCREW SOCKET CAP M5X40 (SS)	4
10		V-SCS-0060	SCREW SOCKET BUTTGN M4X20 (SS)	4
11		V-BCS-0010	SCREW SOCKET BUTTGN M5X12 (SS)	8
12		V-BCS-0007	SCREW SOCKET BUTTGN M4X12 (SS)	4
13		V-GSC-0026	SCREW GRUB M5X10 (SS)	2
14		3-8405-1-1-*	DRIVEN PULLEY	1
15		V-BLT-0005	BELT TIMING - 130XL037 (20 & 32 PULLEY)	1
16	SECTION - 13.3	6-4851-1-1-*	MOTOR ASSY	1
17		V-NUT-0004	NUT M6 (SS)	2
18		V-SCS-0020	SCREW SOCKET CAP M6X45 (SS)	2
19	SECTION - 8.3.1	4-4661-0-1-*	BOTTOM BASE CLAMP SUB-ASSY	1
20		4-0649-0-1-*	BOTTOM BASE CLAMP	1
21		V-SCS-0044	SCREW SOCKET CAP M 0X40 (SS)	2

TRONICS	DRIVING ROLLER ASSY (3-0927.*-1-*)	SECTION	13.1
		SHEET	1



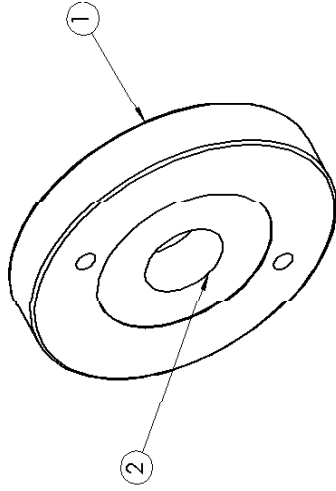
VARIANT	DETAILS
3-0927-3-1-*	100 MM DRIVING ROLLER ASSY
3-0927-5-1-*	150 MM DRIVING ROLLER ASSY

TRONICS	DRIVING ROLLER ASSY (3-0927.*-1-*)	SECTION	13.1
		SHEET	2



Item	Location	Part No.	Description	Qty.
1		3-0053-3-1-*	DRIVING ROLLER (100 MM)	1
		3-0053-5-1-*	DRIVING ROLLER (150 MM)	1
2		3-0344-3-1-*	DRIVING SHAFT (100 MM)	1
		3-0344-5-1-*	DRIVING SHAFT (150 MM)	1
3		V-CLP-0020	CIRCLIP EXT (5/8" SHAFT) - N1400 0062	2
4	SECTION - 13.11	3-0843-1-1-*	BEARING HUB ASSY	2
5		V-GSC-0039	SCREW GRU3 M6X10 (SS)	4

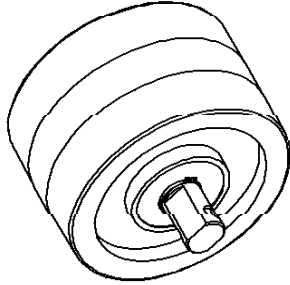
TRONICS	BEARING HUB ASSY (3-0840-1-1-*)	SECTION	13.1.1
		SHEET	1



Item	Location	Part No.	Description	Qty.
1		3-0348-1-1-*	BEARING HUB	1
2		V-BRG-0032	BEARING (1/2") - R8ZZ	1

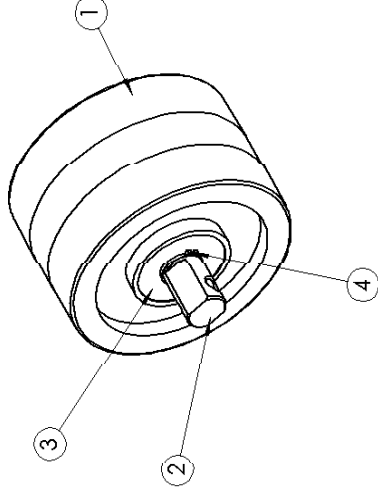
TRONICS	SECTION	
	SHEET	

TRONICS	DRIVEN ROLLER ASSY (3-3005*-1-*)	SECTION	13.2
		SHEET	1



VARIANT	DETAILS
3-3005-3-1-*	100 MM DRIVEN ROLLER ASSY
3-3005-5-1-*	150 MM DRIVEN ROLLER ASSY

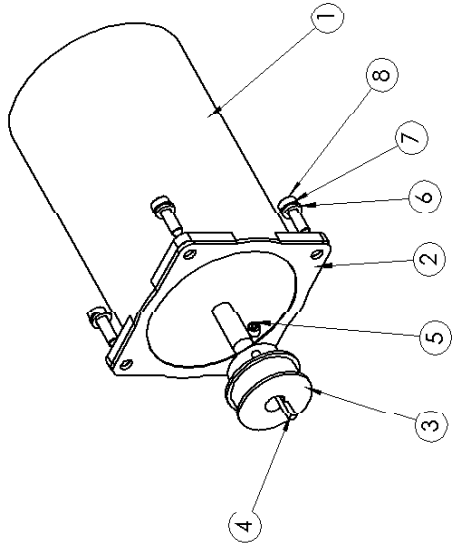
TRONICS	DRIVEN ROLLER ASSY (3-3005*-1-*)	SECTION	13.2
		SHEET	2



Item	Location	Part No.	Description	Qty.
1		3-3003-3-1-*	DRIVEN ROLLER (100 MM)	1
2		3-3003-5-1-*	DRIVEN ROLLER (150 MM)	1
3		3-3004-3-1-*	DRIVEN SHAFT (100 MM)	1
3		3-3004-5-1-*	DRIVEN SHAFT (150 MM)	1
4		V-BRG-0032	BEARING (1/2") - R8ZZ	2
		V-CLP-0019	CIRCLIP EXT (1/2" SHAFT) - N1400 0050	2

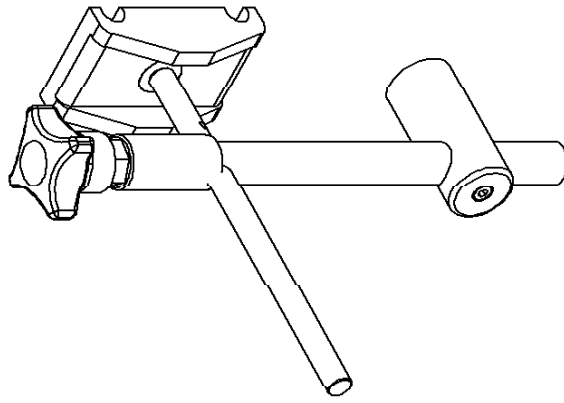
TRONICS	SECTION
	SHEET

TRONICS	MOTOR ASSY (6-4851-1-1-*)	SECTION	13.3
		SHEET	1



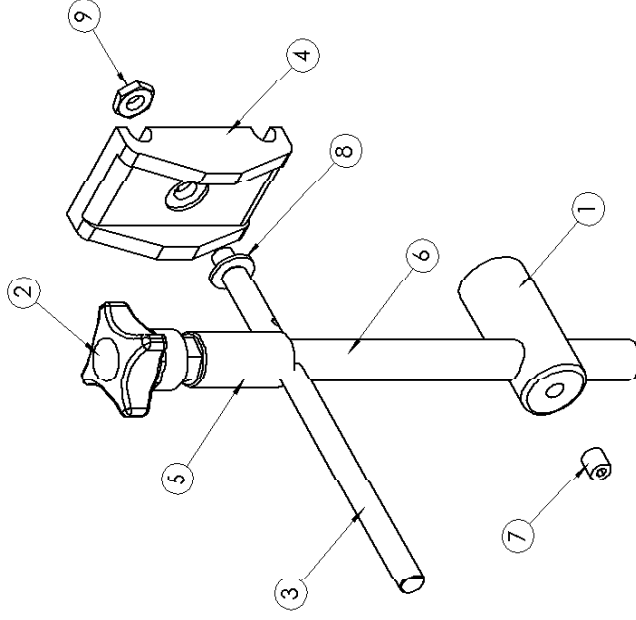
Item	Location	Part No.	Description	Qty.
1		V-MTR-0009	MOTOR STEPPER - 103-845-0245	1
2		6-0699-1-1-*	STEPPING MOTOR SPACER	1
3		3-8404-1-1-*	DRIVE PULLEY (DIA 3/8" SHAFT)	1
4		P-4851-1-1-*	KEY STEEL 3 X 3 X 22	1
5		V-GSC-0023	SCREW GRUB M5X5 (SS)	2
6		V-WSF-0001	WASHER M5 (SS)	4
7		V-SPA-0003	WASHER SPRING M5 (SS)	4
8		V-SCS-0002	SCREW SOCKET CAP M5X16 (SS)	4

TRONICS	RAIL HOLDER ASSY (8-7026*-1-*)		SECTION	14
			SHEET	1



VARIANT	DETAILS
8-7026-1-1-*	RAIL HOLDER ASSY (SHORT)
8-7026-3-1-*	RAIL HOLDER ASSY (LONG)

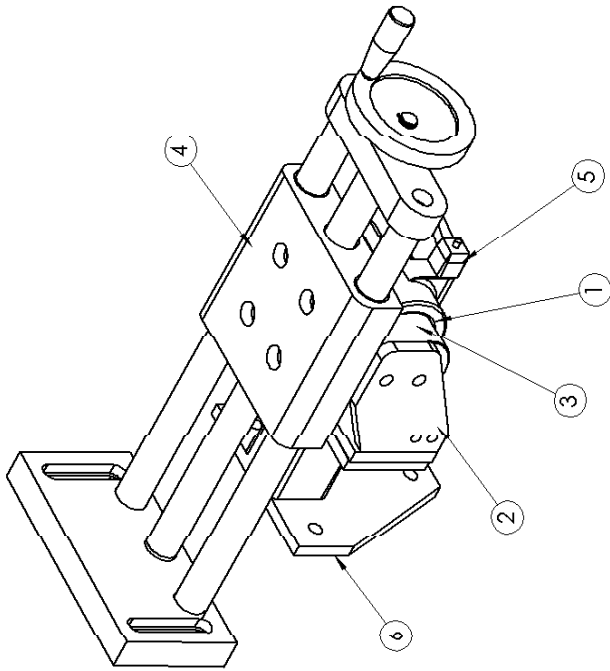
TRONICS	RAIL HOLDER ASSY (8-7026*-1-*)		SECTION	14
			SHEET	2



Item	Location	Part No.	Description	Qty.
1		8-7036-1-1-*	SUPPORT BAR (70 MM)	1
		8-7036-2-1-*	SUPPORT BAR (125 MM)	1
2		V-KNB-183-54921	MARBETT KNOB 183-54921	1
3		8-7035-1-1-*	CROSS BAR	1
4		V-RAL-13761	RAIL CLAMP - 13761 (RCS)	1
5		8-7037-1-1-*	LOCKER	1
6		2-B795-1-1-*	UP BAR (250 MM)	1
		2-B795-3-1-*	UP BAR (400 MM)	1
7		V-GSC-M10x10	GRUB SCREW M10x10	1
8		V-WSH-M10	WASHER FLAT M10	1
9		V-NUT-HHM10	HEXAGONAL HALF NUT M10	1

TRONICS	SECTION	
	SHEET	

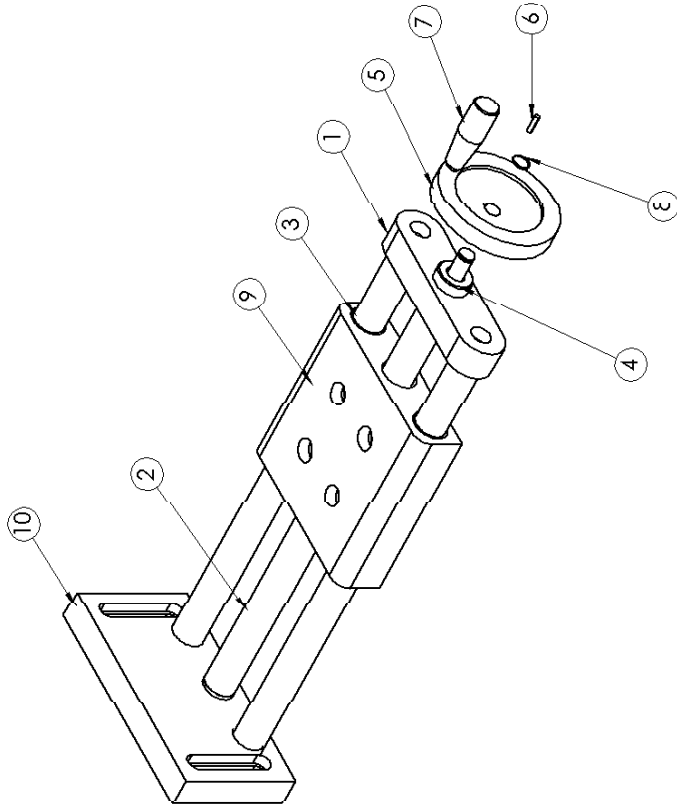
TRONICS	BACKING PAD SUPPORT ASSEMBLY (8-C004-1-1-*)	SECTION	15
		SHEET	1



Item	Location	Pat No.	Description	Qty.
1		8-3389-1-1-*	CASTING CLAMP	1
2		8-0659-1-1-*	MOUNTING BRACKET	1
3		8-0806-1-1-*	SWIVEL SHAFT	1
4	SECTION - 1E:1	8-B985--1-*	BACKING PAD HORIZONTAL SLIDE ASSY - RHS	1
5		V-HLV-M10 x 70	PATCHET HANDLE LEVER-M10 x 70 (RCS)	1
6		1-8183-3-1-*	BACK. PLATE MOUNTING BRACKET (10MM LONG)	1

TRONICS	SECTION

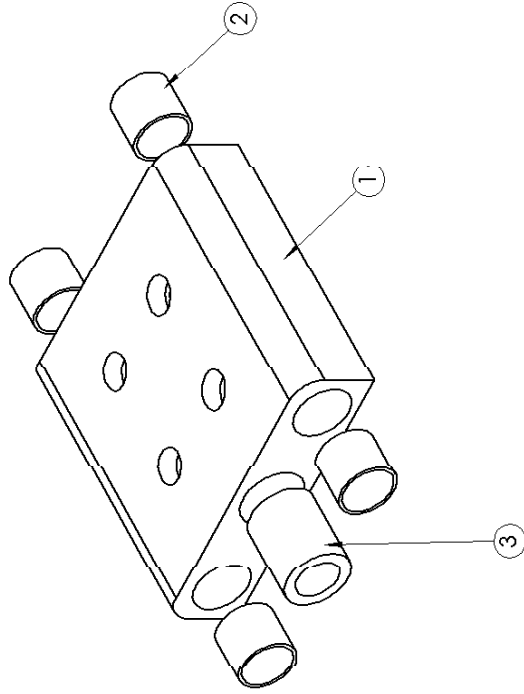
TRONICS	BACKING PAD HORIZONTAL SLIDE ASSY (8-B985-1-1-*)	SECTION	15.1
			SHEET



Item	Location	Part No.	Description	Qty.
1	SECTION - 8.3.1	8-46650-1-*	TOP BLOCK SUB-ASSY	1
2		8-07762-1-*	ADJUSTMENT SCREW (400MM)	1
3		8-07642-1-*	HORIZONTAL GUIDE BAR (400MM)	2
4		8-25530-1-*	SPACER	1
5		8-98351-1-*	4" DISK HAND WHEEL	1
6		V-KEY-3_175x15	KEY 3.175x15MM LONG	1
7		V-GRP-M6	M6 REVOLVING GRIP	1
8		V-CLP-N1400_0056	EXTERNAL CIRCLIP IMPERIAL-N 400 0050 (CBC)	1
9	SECTION - 15.1.1	8-B9831-1-*	SLIDING BLOCK SUB-ASSY	1
10	SECTION - 15.1.2	8-C0021-1-*	END BLOCK ASSEMBLY	1

TRONICS		SECTION
		SHEET

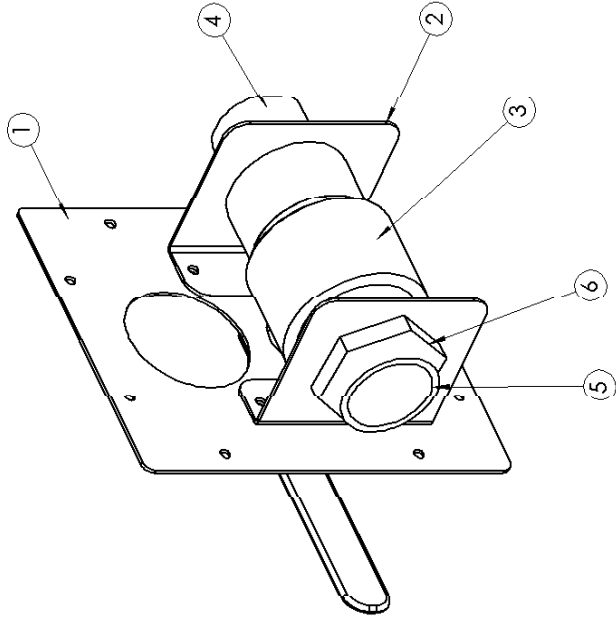
TRONICS	SLIDING BLOCK SUB ASSEMBLY (8-B983-1-1-*)	SECTION	15.1.1
		SHEET	1



Item	Location	Part No.	Description	Qty.
1		8-B982-1-1-*	SLIDING BLOCK	1
2		V-BSH-C3236-4	CYLINDR CAL BUSH -C3236-4 (SIRELUBE)	4
3		8-1464-0-1-*	NUT - BRONZE	1

TRONICS	SECTION
	SHEET

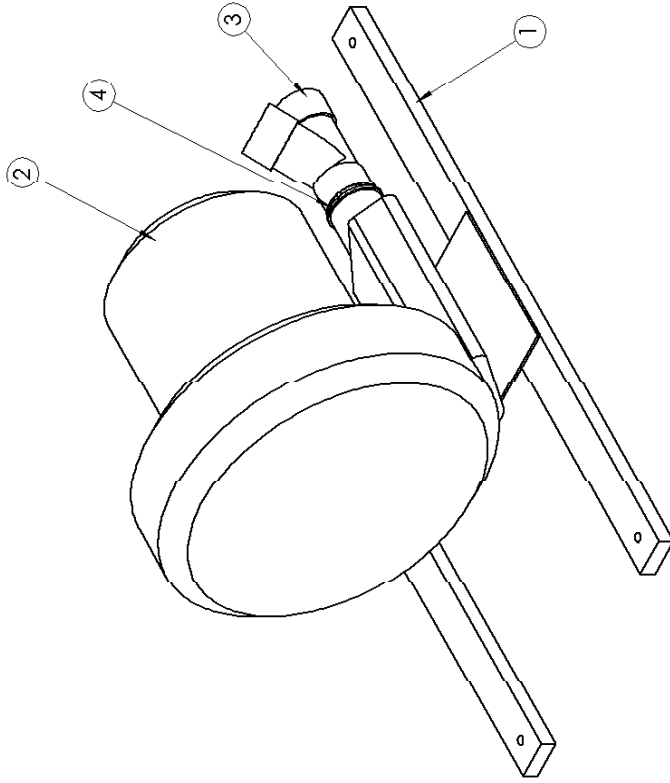
TRONICS	VACUUM RELIEF VALVE ASSY (7-B441-1-1-*)	SECTION
		SHEET



Item	Location	Part No.	Description	Qty.
1		1-B430-1-1-2	COVER	1
2		1-B429-1-1-2	VALVE BRACKET	2
3		1-MIS-J360-40	JOHNS VALVE 1 1/2 INCH (40)MM BALL VALVE	1
4		1-MIS-PVC ADAPTER	PVC ADAPTER 40MM BSP THREAD	1
5		1-MIS-40MM X 45MM	40MM BSF ALL THREAD PIPE X 45MM	1
6		1-NUT-40MMV-BSP	40MM BSF NUT	1

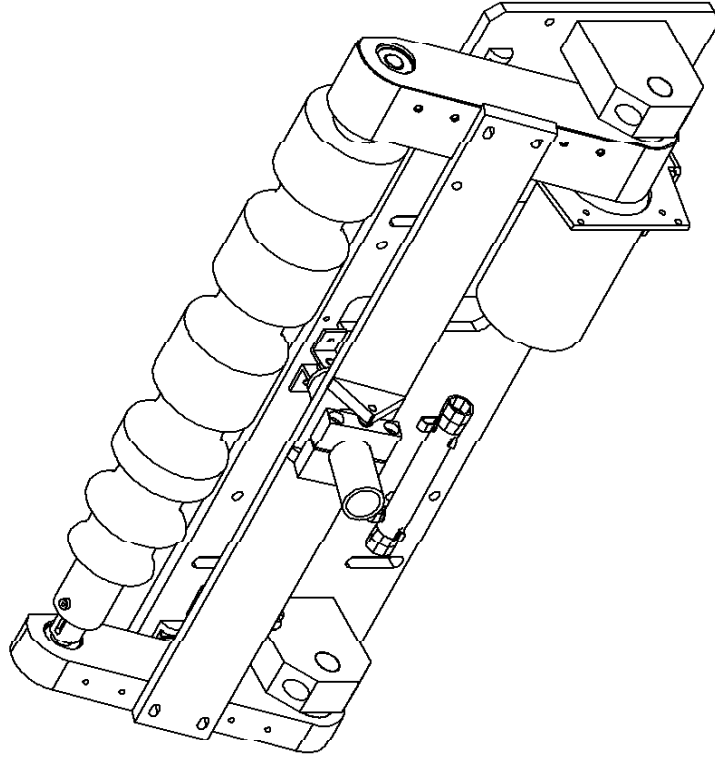
TRONICS	SECTION
	SHEET

TRONICS	VACUUM PUMP ASSY (7-B440-1-1-*)	SECTION 18
		SHEET 1



Item	Location	Part No.	Description	Qty.
1		3-9824-0-1-1	VACUUM PUMP SUPPORT	2
2		V-MIS-HB-329	SMALL VACUUM PUMP (DUNAVAC)	1
3		V-MIS-1.5 INCH 135 DEGRE Y	1.5 INCH 135 DEGREE "Y"	1
4		V-MIS-PVC ADAPTER	PVC ADAPTER 40MM BSP THREAD	1

TRONICS	SCROLL ASSEMBLY (7-B300-*-1-*)	SECTION 19
		SHEET 1



VARIANT	DETAILS
7-B300-1-1-*	SCROLL ASSEMBLY - 450 MM (LHS)
7-B300-2-1-*	SCROLL ASSEMBLY - 450 MM (RHS)

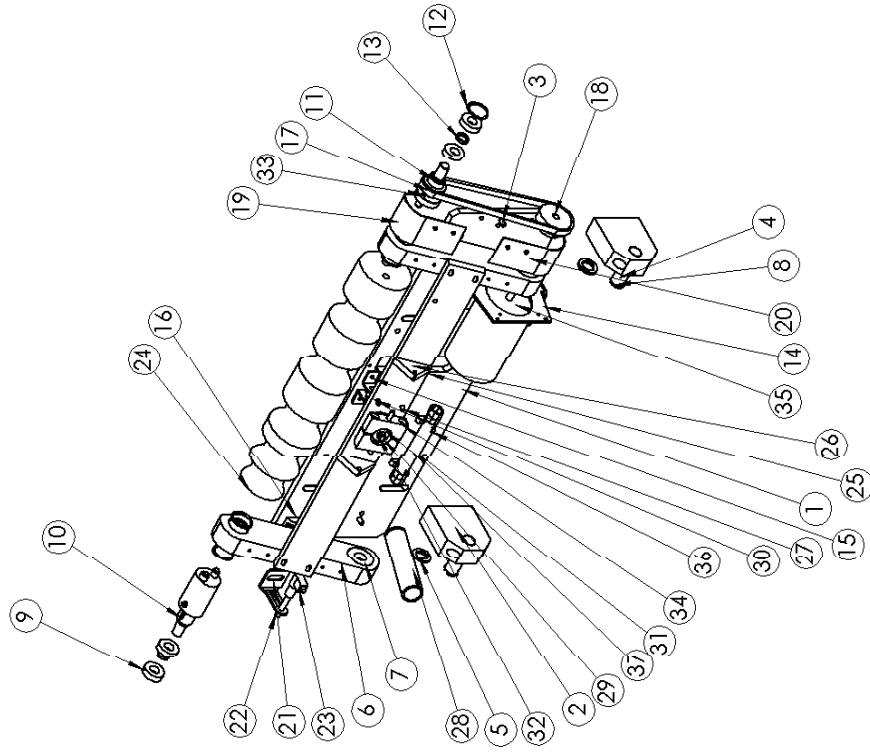
TRONICS	SECTION
	SHEET

TRONICS

**SCROLL ASSEMBLY
(7-B300-*-1-*)**

SECTION 19

SHEET 1



TRONICS

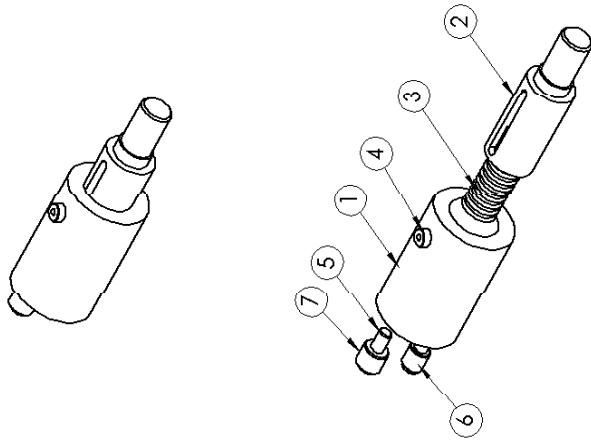
SECTION

SHEET

Item	Location	Pat No.	Description	Qty.
1		7-A548-1-1-4	BASE FLATE - 450mm	1
2		7-6763-0-1-3	SHAFT BLOCK	2
3		V-SPN-SPM050020DSF	SPR. PN DIA6x20-SPM060020DSF(CBC)	7
4		7-6758-0-1-2	SHAFT (CBC)	2
5		V-WSH-M20	WASHER FLAT M20	4
6		7-6764-0-1-5	MOUNTING ARM-MACHINED	2
7		V-BRG-6004ZZ-SS	S.ROWDEEP G BALL B -6004ZZ-SS (NSK-3BC)	4
8		V-CLP-D1400_0200	EXTERNAL CIRCLIP METRIC-D1400 0200 (2BC)	2
9		V-BRG-6002ZZ-SS	S.ROWDEEP G BALL B.-6002ZZ-SS (NSK-3BC)	4
10	SECTION - 19.1	7-8357-0-1-2	IDLE SUB SHAFT ASSEMBLY	1
11		C-8103-0-1-1	TIMING PULLEY - 20XLS - MACHINING DE'AIL	1
12		V-CLP-D1300_032	INTERNAL CIRCLIP - D1300 032 (CBC)	4
13		P-6757-1-1-6	ST/STEEL TUBE OD19/ID15.8 x 4mm LONG	2
14		7-8470-0-1-5	MOTOR BRACKET	1
15		7-8333-0-1-2	BRACKET	2
16		7-6762-0-1-2	UPPER STOP	2
17		V-BLT-210XL037	TIMING BELT - 210XL037 (CBC)	1
18		C-8104-2-1-2	TIMING PULLEY MACHINING - 32XL037	1
19		7-8472-2-1-2	BELT GUARD UPPER	1
20		7-8473-2-1-2	BELT GUARD LOWER	1
21		7-3634-0-1-3	SENSOR HOLDER	1
22		V-SNR-BES5 6-343-S4-C	PROXIMITY SENSOR	1
23		V-SNR-WK4_4-4	SENSOR LEAD - 9C DEGREES PLUG	2
24			SCROLL SCREW - 450 MM (RH)	1
25			SCROLL SCREW - 450 MM (LH)	1
26		7-A549-1-1-3	HORIZONTAL PLATE - 450mm	1
27		7-8337-0-1-1	HOLDER	2
28		V-SCS-M5x20	SOCKET HEAD CAP SCREW - M5x20	4
29		7-8336-0-1-2	TUBE ASSEMBLY	1
30		7-8332-0-1-1	THREADED SHAFT	1
31		V-SPR-AGSC749	COMPRESSION SPRING C749(AGS)	1
32		V-WUT-M12	WASHER FLAT M12	1
33	SECTION - 19.2	V-NLUT-M10-N	HEXAGONAL NUT NYLOCK M10	1
34		7-8355-0-1-3	DRIVE SUB-SHAFT ASSEMBLY	1
35		7-9794-0-1-1	MOUNTING BLOCK ASSEMBLY	1
36		V-MTR-103-845-0245	STEPPER MOTOR-103-845-0245 (SANYO DENKI)	1
37		V-MIS-16MM TOOL CLIP	16MM TOOL CLIP	2
		V-MIS-16X17 PIPE SPANNER	16X17 PIPE SPANNER	1

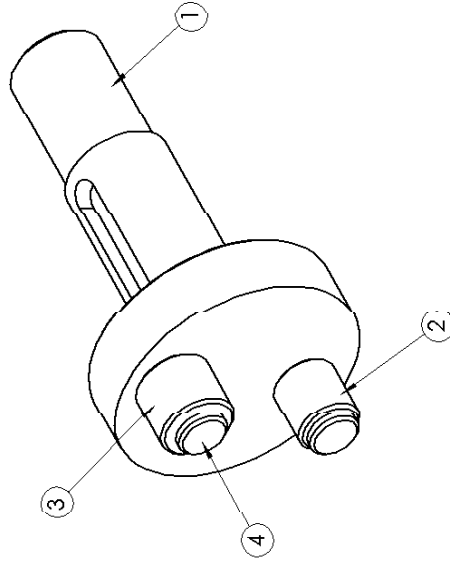
TRONICS	SECTION
	SHEET

TRONICS	IDLE STUB SHAFT ASSY (7-8357-1-1-*)	SECTION	19.1
		SHEET	1



Item	Location	Part No.	Description	Qty.
1		7-8359-0-1-*	IDLE STUB SHAFT - OUTER	1
2		7-8358-0-1-*	IDLE STUB SHAFT INNER	1
3		V-SPR-AGSC749	COMPRESSION SPRING C749(AGS)	1
4		V-SCS-M4x10	SOCKET HEAD CAP SCREW - M4x10	1
5		7-9768-0-1-*	SHAFT PIN	2
6		7-9769-0-1-*	DELRIIN PIN - 10mm	1
7		7-9771-0-1-*	DELRIIN PIN - 12mm	1

TRONICS	DRIVE STUB SHAFT ASSY (7-8355-1-1-*)	SECTION	19.2
		SHEET	1



Item	Location	Part No.	Description	Qty.
1		7-8356-0-1-*	DRIVE STUB SHAFT	1
2		7-9769-0-1-*	DELRIIN PIN - 10mm	1
3		7-9771-0-1-*	DELRIIN PIN - 12mm	1
4		7-9768-0-1-*	SHAFT PIN	2

TRONICS	SECTION	
	SHEET	

ENGLISH

Fork Sensor with infra-red-light Operating Instructions

Safety Specifications

- ▶ Read the operating instructions before starting operation.
- ▶ Connection, assembly, and settings only by competent technicians.
- ▶ Protect the device against moisture and soiling when operating.
- ▶ No safety component in accordance with EU machine guidelines.

Proper Use

The WF Fork Sensor is an optoelectronic sensor, which works with a sender and receiver unit. It is used for detecting objects and marks optically and without contact.

Starting Operation

1 L: Light-switching; if light received, output (Q) switches. D: dark-switching, if light interrupted, output (Q) switches.

2 Connect and secure cable receptacle tension-free. The following apply for connection in **B**: brn=brown, blu=blue, blk=black, wht=white. Connect cables.

3 Mount sensor to suitable holders (e.g. SICK mounting bracket).

Connect photoelectric switch to operating voltage (see type label); power indicator should light up.

Alignment of light received:

Set the control knob to max.

The LED signal strength indicator (yellow) lights constantly if the light reception is optimal. If it does not light or too little light is received, clean the WF.

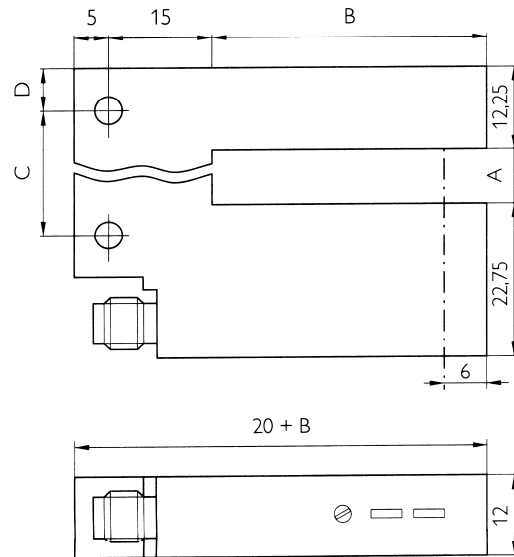
Checking Object Detection

Place the object in the light beam path; the LED (red) must light. If it does not light, reduce the sensitivity by turning the rotary knob until the LED lights. After you remove the object, the LED signal strength indicator (yellow) must light again. If this does not happen, reduce the sensitivity until the threshold is set correctly.

Maintenance

SICK photoelectric switches do not require any maintenance. We recommend that you clean the optical interfaces and check the screw connections and plug-in connections at regular intervals.

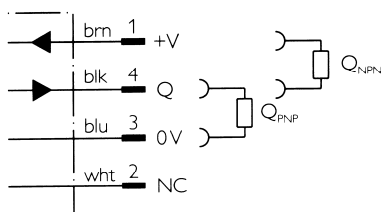
SENSICK WF



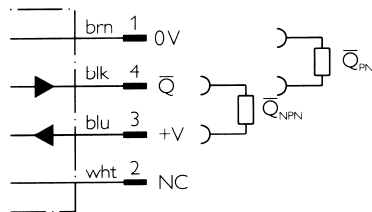
	A (mm)	B (mm)	C (mm)	D (mm)
WF 2	2	40	14	6.25
WF 15	15	40	27	6.25
WF 30	30	40	42	6.25
WF 50	50	57	40	17.25
WF 80	80	57	70	17.25
WF 120	120	57	110	17.25

WF	-B4150	-B4210
Fork width	2 / 15 / 30 / 50 / 80 / 120 mm	2 mm
Supply voltage U_V	DC 10 ... 30 V	DC 10 ... 30 V
Output current I_{max}	100 mA	100 mA
Signal sequence	500/s	10 000/s
Response time	1 ms	30 μ s
Enclosure rating	IP 65	IP 65
VDE protection class	I	I
Circuit protection ¹⁾	B, C	B, C
Ambient operating temperature	-20 ... +60 °C	-20 ... +60 °C

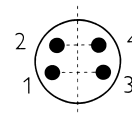
- ¹⁾ B = Outputs protected against short circuits
C = Interference pulse suppression



L

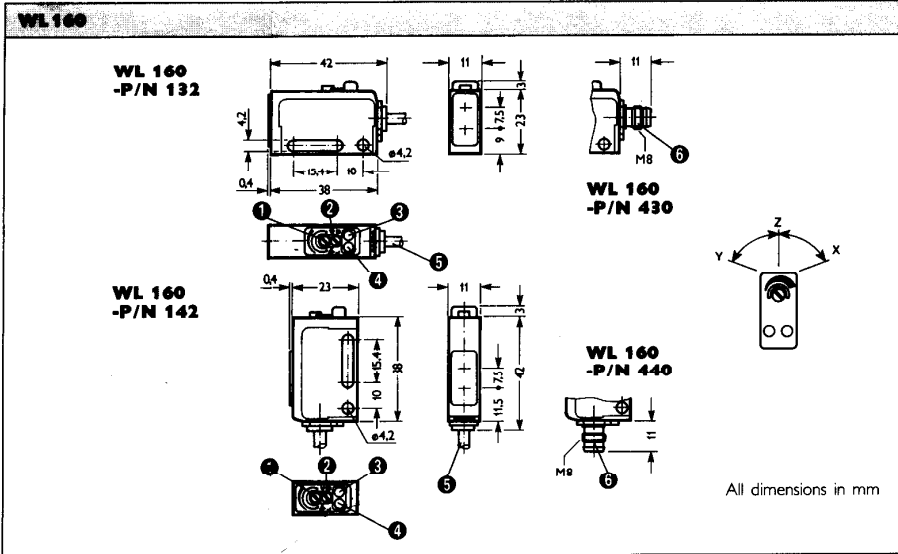


D



WL 160

Photoelectric Proximity Switch Operating instructions



0530840

Explanations

- ① Two turn sensitivity control, with dial indicator, to set the switching threshold.
- ② Light/Dark-switching selector. Light-switching: the output is "on" with light-path uninterrupted. Dark-switching: the output is "on" with light-path interrupted.
- ③ Red LED
Switching indicator; lit when the intensity of the received light exceeds the switching threshold (see diagram of functions).
- ④ Green LED
Reserve indicator; lit when the operating reserve exceeds the switching threshold by more than 50% (see diagram of functions).
- ⑤ 2m Connecting Cable or
⑥ M8 Plug
(Cable receptacles have to be ordered separately).

Alignment

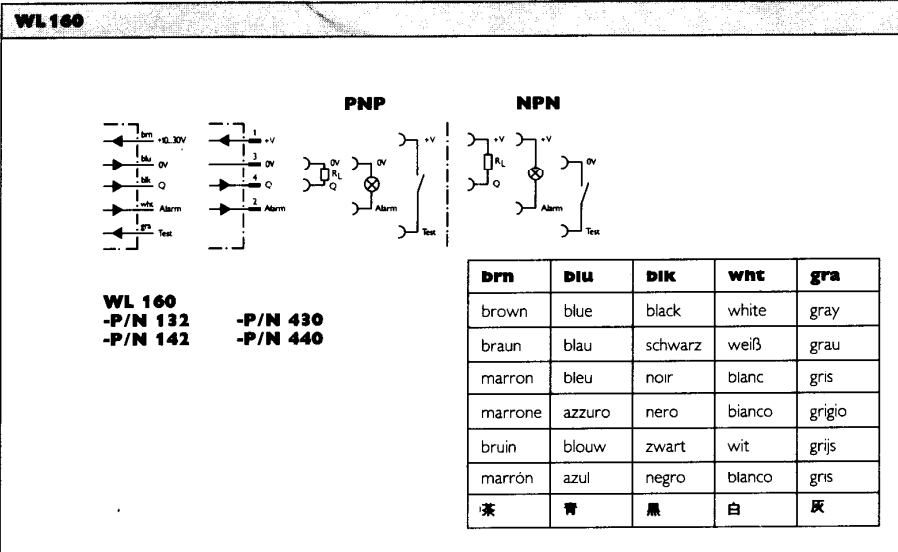
Align the sender and reflector. A red light spot appears on the reflector. Pan the device in horizontal and vertical directions to find the points where the red LED switches on and off. Determine the mid-points and fix the unit. The green LED should also be on, i.e. switching reserve 50% or more. The switching threshold, i.e. sensitivity, has to be adjusted for detection of transparent and small objects and for positioning tasks. It may also be necessary to use a slotted mark, with consequent reduction of maximum range, see table...

Alarm

The "Alarm" switching output gives early warning of dirt build up, misalignment etc. which could eventually lead to system failure (see diagram of functions).

Test input

The light path between WL 160 and reflector must be uninterrupted. The emitter is switched off by operation of the test input (see connection diagram). A change of the output state signals correct functioning. Caution: This function does not comply with Occupational Safety Regulations.



WL 160	-N	-P
Operating range RW with reflector P 250	0 ... 2 m	
Supply voltage V_S	DC 10 ... 30 V	
Max. output current (I_{OUT})	≤ 100 mA	
Switching frequency max. ¹⁾	550/s	
Response time ²⁾	0,9 ms	
Enclosure type	IP 67	
Circuit protection ³⁾	A, B, C	
Ambient operating temperature T_A	- 25 ... + 55 °C	
¹⁾ With a light-dark time ratio of 1:1 ²⁾ With resistive load ³⁾ A = V_S -input, reverse-polarity protected B = Output Q short-circuit protected C = interference pulse suppression *) With polarizing filter		

Tronics Machine Electrical Specifications

110 V Ratings:

Series 3 (No Vacuum Module) 110VAC 20A Single Phase

Main Breaker 20A

Frequency: 50/60 Hz

Driver Fuse Rating = 4A

Series 3 (With Vacuum Module) 110VAC 32A Single Phase

Main Breaker 32A

Frequency: 50/60 Hz

Vacuum Circuit Breakers 20A

Driver Fuse Rating = 4A

220 V Ratings:

Series 3 (No Vacuum Module) 220VAC 16A Single Phase

Main Breaker 16A

Frequency: 50/60 Hz

Driver Fuse Rating = 2.5A

Series 3 (With Vacuum Module) 220VAC 20A Single Phase

Main Breaker 20A

Frequency: 50/60 Hz

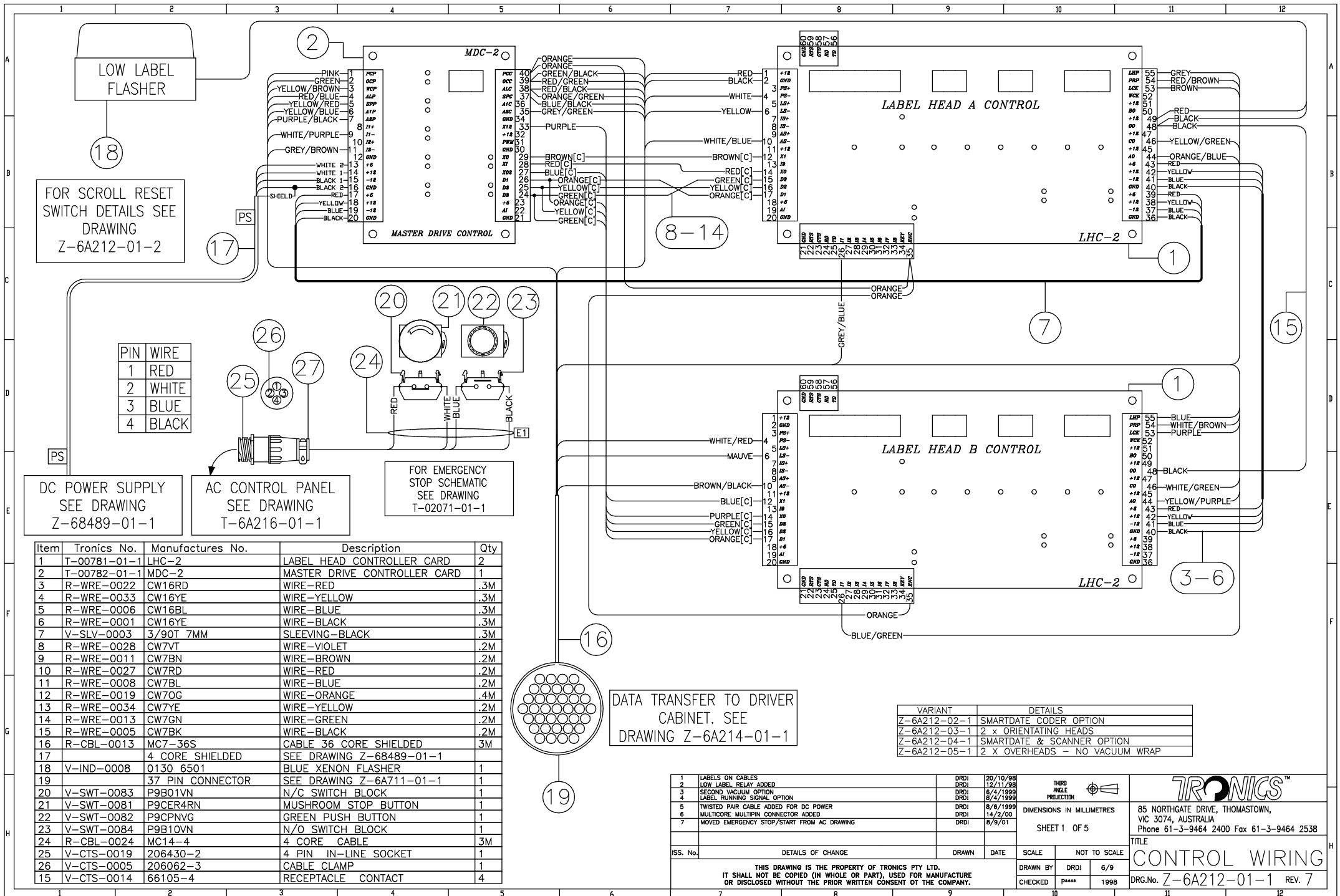
Vacuum Circuit Breakers 16A

Driver Fuse Rating = 2.5A

Series III

Wiring Diagrams

BLD-06



FOR SCROLL RESET SWITCH DETAILS SEE DRAWING Z-6A212-01-2

PIN	WIRE
1	RED
2	WHITE
3	BLUE
4	BLACK

DC POWER SUPPLY SEE DRAWING Z-68489-01-1

AC CONTROL PANEL SEE DRAWING T-6A216-01-1

FOR EMERGENCY STOP SCHEMATIC SEE DRAWING T-02071-01-1

Item	Tronics No.	Manufactures No.	Description	Qty
1	T-00781-01-1	LHC-2	LABEL HEAD CONTROLLER CARD	2
2	T-00782-01-1	MDC-2	MASTER DRIVE CONTROLLER CARD	1
3	R-WRE-0022	CW16RD	WIRE-RED	.3M
4	R-WRE-0033	CW16YE	WIRE-YELLOW	.3M
5	R-WRE-0006	CW16BL	WIRE-BLUE	.3M
6	R-WRE-0001	CW16YE	WIRE-BLACK	.3M
7	V-SLV-0003	3/90T 7MM	SLEEVING-BLACK	.3M
8	R-WRE-0028	CW7VT	WIRE-VIOLET	.2M
9	R-WRE-0011	CW7BN	WIRE-BROWN	.2M
10	R-WRE-0027	CW7RD	WIRE-RED	.2M
11	R-WRE-0008	CW7BL	WIRE-BLUE	.2M
12	R-WRE-0019	CW7OG	WIRE-ORANGE	.4M
13	R-WRE-0034	CW7YE	WIRE-YELLOW	.2M
14	R-WRE-0013	CW7GN	WIRE-GREEN	.2M
15	R-WRE-0005	CW7BK	WIRE-BLACK	.2M
16	R-CBL-0013	MC7-36S	CABLE 36 CORE SHIELDED	3M
17		4 CORE SHIELDED	SEE DRAWING Z-68489-01-1	
18	V-IND-0008	0130 6501	BLUE XENON FLASHER	1
19		37 PIN CONNECTOR	SEE DRAWING Z-6A711-01-1	1
20	V-SWT-0083	P9B01VN	N/C SWITCH BLOCK	1
21	V-SWT-0081	P9CER4RN	MUSHROOM STOP BUTTON	1
22	V-SWT-0082	P9CPNVG	GREEN PUSH BUTTON	1
23	V-SWT-0084	P9B10VN	N/O SWITCH BLOCK	1
24	R-CBL-0024	MC14-4	4 CORE CABLE	3M
25	V-CTS-0019	206430-2	4 PIN IN-LINE SOCKET	1
26	V-CTS-0005	206062-3	CABLE CLAMP	1
15	V-CTS-0014	66105-4	RECEPTACLE CONTACT	4



DATA TRANSFER TO DRIVER CABINET. SEE DRAWING Z-6A214-01-1

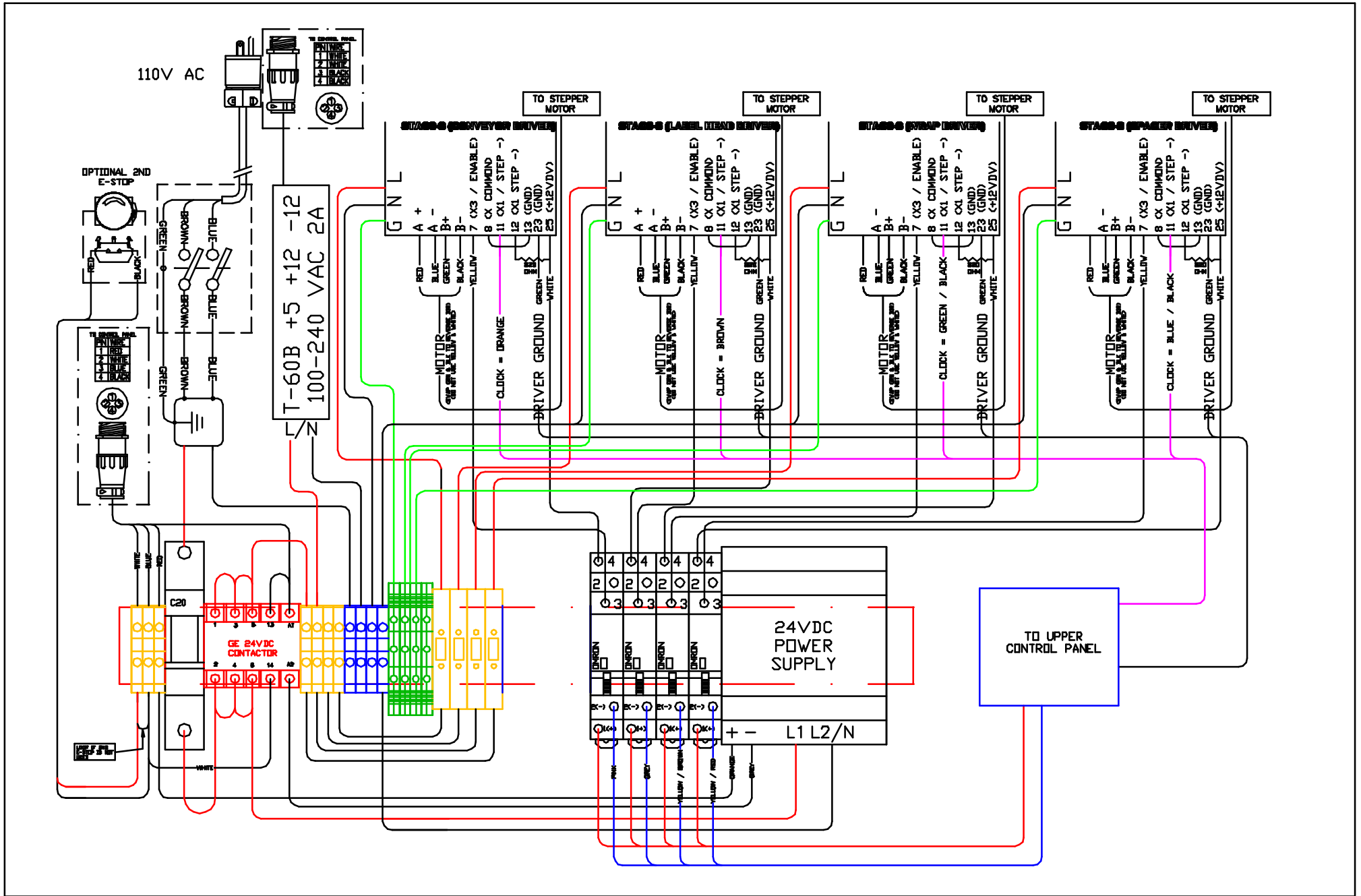
VARIANT	DETAILS
Z-6A212-02-1	SMARTDATE CODER OPTION
Z-6A212-03-1	2 x ORIENTATING HEADS
Z-6A212-04-1	SMARTDATE & SCANNER OPTION
Z-6A212-05-1	2 x OVERHEADS - NO VACUUM WRAP

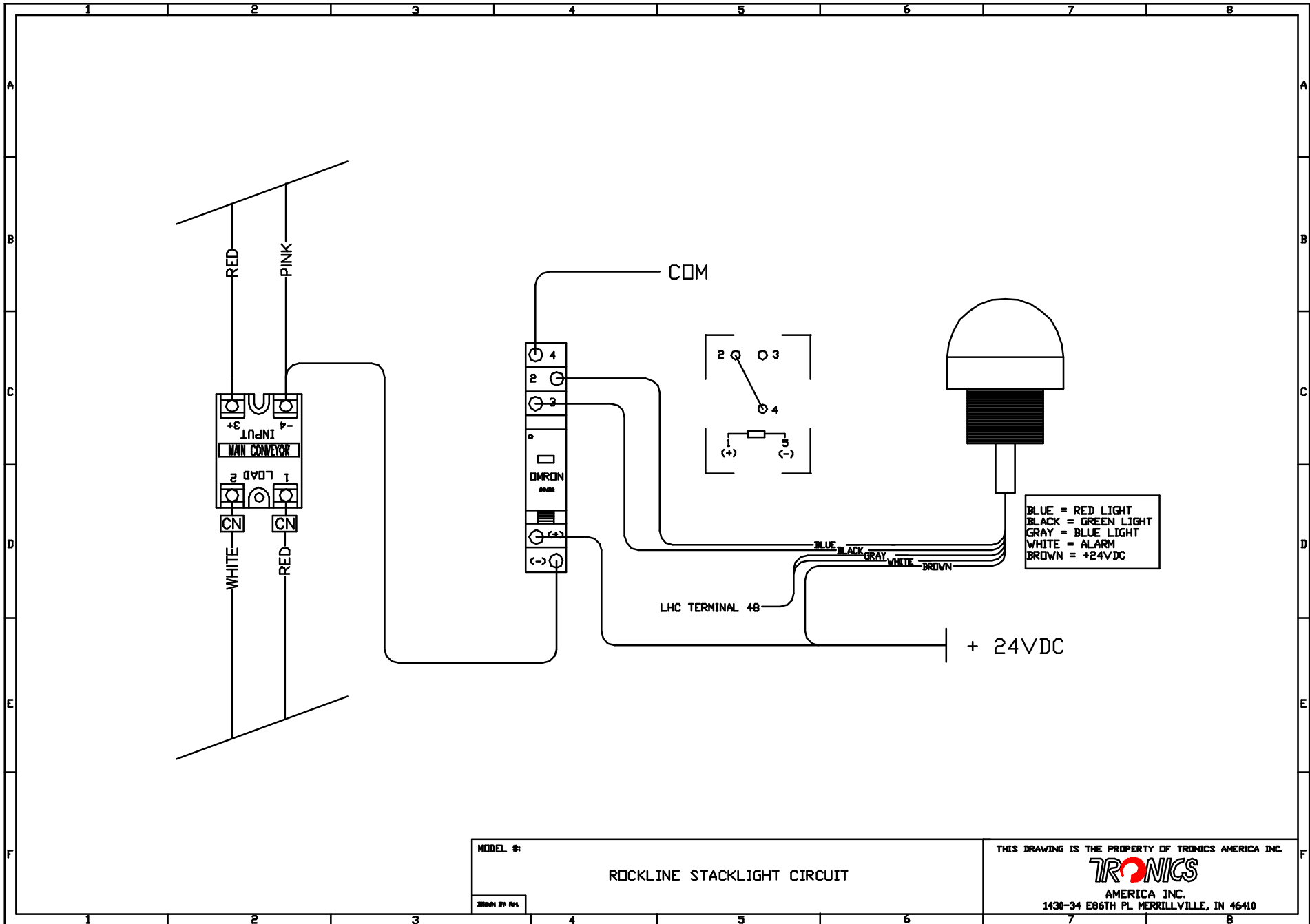
1	LABELS ON CABLES	DRDI	26/10/98	THIRD ANGLE PROJECTION	
2	LOW LABEL RELAY ADDED	DRDI	12/11/98		
3	SECOND VACUUM OPTION	DRDI	6/4/1999		
4	LABEL RUNNING SIGNAL OPTION	DRDI	8/4/1999		
5	TWISTED PAIR CABLE ADDED FOR DC POWER	DRDI	8/6/1999	DIMENSIONS IN MILLIMETRES	85 NORTHGATE DRIVE, THOMASTOWN, VIC 3074, AUSTRALIA Phone 61-3-9464 2400 Fax 61-3-9464 2538
6	MULTICORE MULTIPIN CONNECTOR ADDED	DRDI	14/2/00		
7	MOVED EMERGENCY STOP/START FROM AC DRAWING	DRDI	8/9/01		
ISS. No.		DETAILS OF CHANGE		SCALE	NOT TO SCALE
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				CHECKED	P**** 1998
				SHEET 1 OF 5	
				TITLE	
				CONTROL WIRING	
				DRG.No. Z-6A212-01-1 REV. 7	

TERMINAL	MULTICORE WIRE FUNCTION	
MDC 1	PINK	PRODUCT CONVEYOR S/S/RELAY
LHCA 55	GREY	LABEL HEAD A S/S/RELAY
LHCB 55	BLUE	LABEL HEAD B S/S/RELAY
MDC 4	RED/BLUE	ALIGNING WHEEL S/S/RELAY
MDC 2	GREEN	OVERHEAD S/S/RELAY
MDC 3	YELLOW/BROWN	WRAP S/S/RELAY
MDC 5	YELLOW/RED	SPACER DRIVER S/S/RELAY-NOT USED IF SCROLL OPTION IS FITTED
LHCA 54	RED/BROWN	LABEL HEAD A CODER HEATER S/S/RELAY-OPTIONAL
LHCB 54	WHITE/BROWN	LABEL HEAD B CODER HEATER S/S/RELAY-OPTIONAL
MDC 6	YELLOW/BLUE	VACUUM UNIT ONE S/S/RELAY - OPTIONAL
MDC 7	PURPLE/BLACK	VACUUM UNIT TWO OR ROLLER WRAP S/S/RELAY - OPTIONAL
MDC 40	ORANGE	PRODUCT CONVEYOR DRIVER CLOCK
LHCA 53	BROWN	LABEL HEAD A DRIVER CLOCK
LHCB 53	PURPLE	LABEL HEAD B DRIVER CLOCK
MDC 38	RED/BLACK	SIDE A ALIGNING WHEEL DRIVER CLOCK
MDC 38	ORANGE/GREEN	SIDE B ALIGNING WHEEL DRIVER CLOCK
MDC 39	RED/GREEN	OVERHEAD DRIVER CLOCK
MDC 39	GREEN/BLACK	WRAP DRIVER CLOCK
MDC 37	BLUE/BLACK	SCROLL DRIVER CLOCK
LHCA 4	WHITE	LABEL HEAD A PRODUCT SENSOR SIGNAL
LHCA 6	YELLOW	LABEL HEAD A GAP SENSOR SIGNAL
LHCB 4	WHITE/RED	LABEL HEAD B PRODUCT SENSOR SIGNAL
LHCB 6	MAUVE	LABEL HEAD B GAP SENSOR SIGNAL
LHCA 46	YELLOW/GREEN	LABEL HEAD A CODER STAMP SIGNAL-OPTIONAL
LHCB 46	WHITE/GREEN	LABEL HEAD B CODER STAMP SIGNAL-OPTIONAL
LHCA 44	ORANGE/BLUE	LABEL HEAD A ORIENTATING AIR RAM-OPTIONAL
LHCB 44	YELLOW/PURPLE	LABEL HEAD B ORIENTATING AIR RAM-OPTIONAL
LHCA 10	WHITE/BLUE	LABEL HEAD A POISON ORIENTATING SENSOR-OPTIONAL
LHCB 10	BROWN/BLACK	LABEL HEAD B POISON ORIENTATING SENSOR-OPTIONAL
LHCA 26	GREY/BLUE	LABEL HEAD A LOW LABEL SENSOR-OPTIONAL
LHCB 26	BLUE/GREEN	LABEL HEAD B LOW LABEL SENSOR-OPTIONAL
MDC 35	GREY/GREEN	ROLLER WRAP CLOCK- ROLLER WRAP OPTION ONLY
LHCA 9	WHITE/PURPLE	SCROLL HOME SIGNAL- ROLLER WRAP OPTION ONLY
LHCA 11	GREY/BROWN	ROLLER WRAP HOME- ROLLER WRAP OPTION ONLY
LHCA 1	RED	+12V DC
LHCA 2	BLACK + SHIELD	GROUND

VARIANT	DETAILS
Z-6A213-02-1	2 x ORIENTATING HEADS
Z-6A213-03-1	2 x OVERHEADS

					THIRD ANGLE PROJECTION 	 85 NORTHGATE DRIVE, THOMASTOWN, VIC 3074, AUSTRALIA Phone 61-3-9464 2400 Fax 61-3-9464 2538
					DIMENSIONS IN MILLIMETRES SHEET 2 OF 5	
ISS. No.	DETAILS OF CHANGE	DRAWN	DATE	SCALE	NOT TO SCALE	TITLE
						MULTICORE TABLE
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MODEL #:

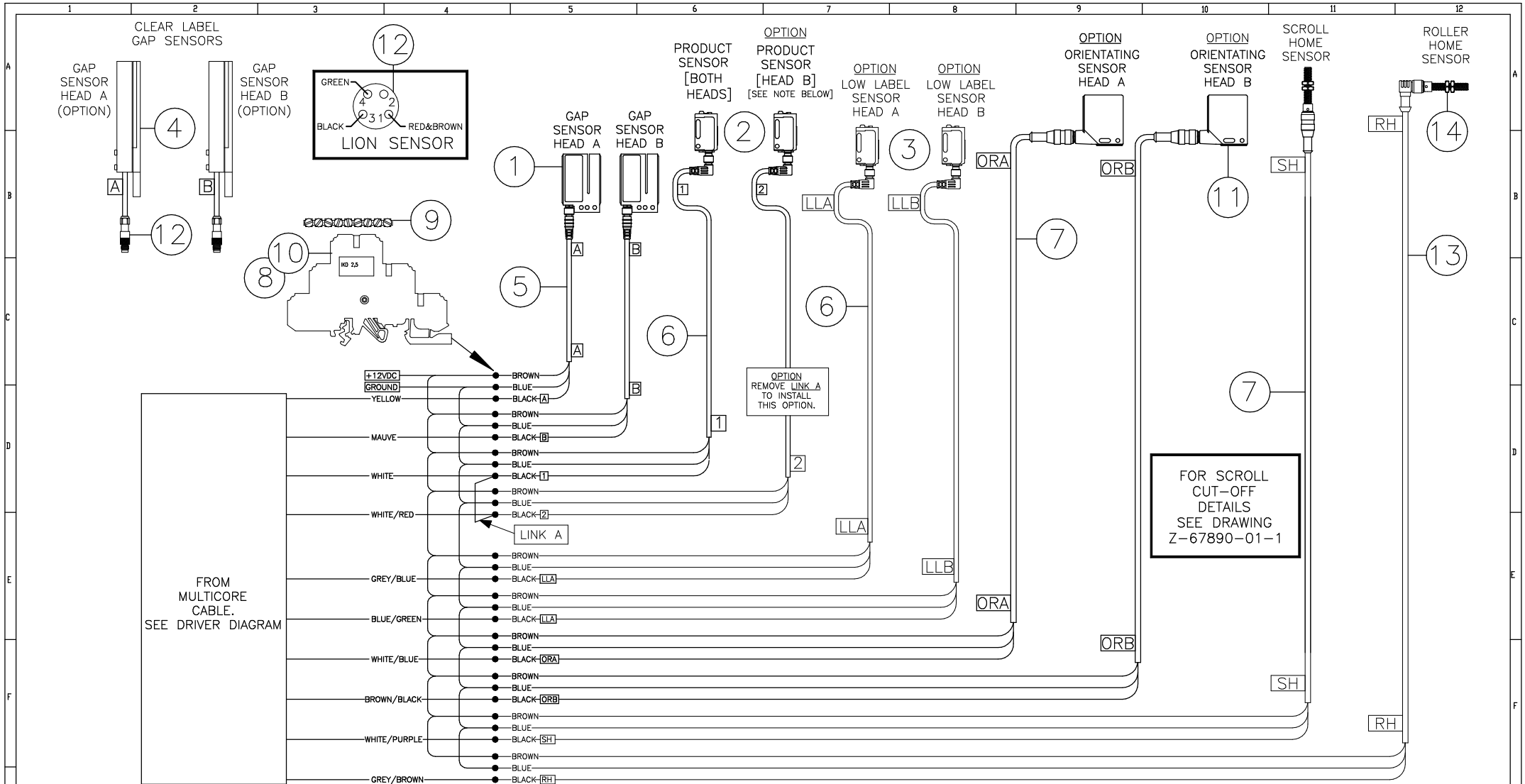
ROCKLINE STACKLIGHT CIRCUIT

REVISED 2/78

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1430-34 EB6TH PL. MERRILLVILLE, IN 46410



FOR SCROLL CUT-OFF DETAILS SEE DRAWING Z-67890-01-1

PARTS LIST				
Item	Tronics No.	Manufactures No.	Description	Qty
1	V-SNR-0050	WF2-N4210	SICK SENSOR GAP SENSOR	2
2	V-SNR-0056	WL 160-N440	OPTICAL SENSOR - REFLEX - NPN	2
3	V-SNR-0072	WT160-N480	OPTICAL SENSOR - DIFFUSE - NPN	2
4	V-SNR-0043	LRD 2100	LION CLEAR LABEL SENSOR	2
5	V-SNR-0070	3833544	SENSOR LEAD STRAIGHT 8MM	2
6	V-SNR-0066	3833397	SENSOR LEAD R/A 8MM	4
7	V-SNR-0086	33544	SENSOR LEAD STRAIGHT 12MM	3
8	V-TRM-0070	1261.2	SENSOR TERMINAL	10
9	V-TRM-0072	2425.0	BRIDGE	1
10	V-TRM-0071	2699.2	END PLATE	1
11	V-SNR-0053	WT 12-2N430	SENSOR -B/G SUPPRESSION	2
12	V-PLG-0080	3827625	4 PIN PLUG - 8MM	2
13	V-SNR-0068	33390	SENSOR LEAD 5M R/A 12MM	1
14	V-SNR-0059	BI2-EG08-AN6X-H1341	SENSOR PROXIMITY - 8MM NPN	2

ALTERNATIVE SENSOR INFORMATION		
USE	TYPE	DRAWING NUMBER
PRODUCT SENSOR	FIBRE OPTIC	Z-6A215-01-2
GATE/SPACER CONTROL	TIMER SENSOR	Z-60486-01-1

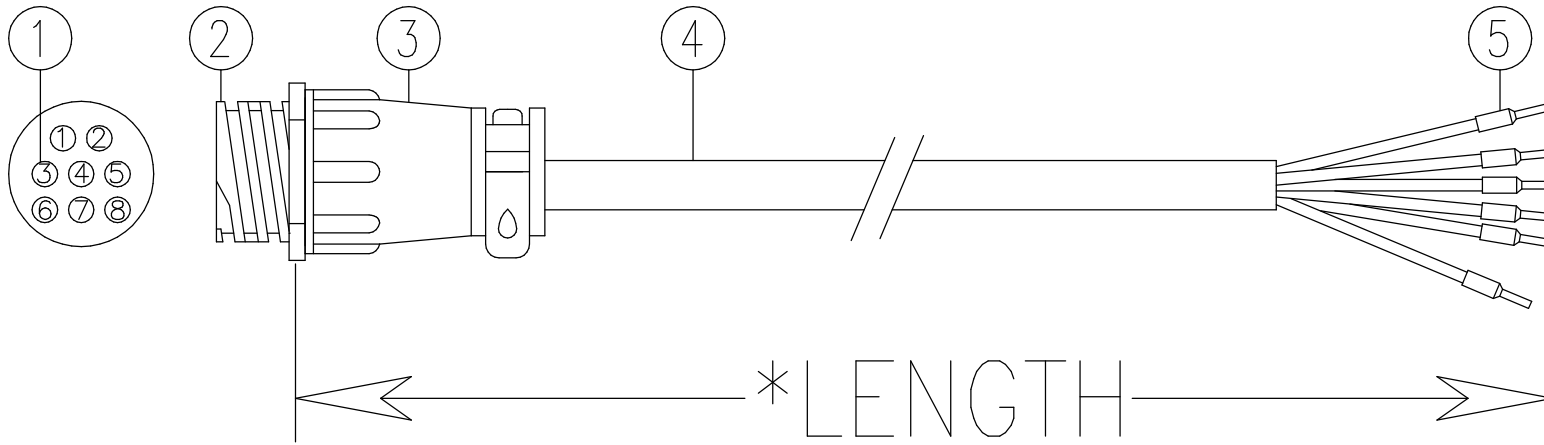
FINAL MODEL OF SENSOR MAY BE CHANGED DUE TO THE PHYSICAL CHARACTERISTICS OF THE LABEL AND/OR THE PRODUCT

VARIANT	DETAILS
Z-6A215-02-1	SENSORS TO USE WITH BOTTLE ROTATOR

2	UPDATED LOW LABEL	DRD:	19/10/98	THIRD ANGLE PROJECTION		TRONICS™ 85 NORTHGATE DRIVE, THOMASTOWN, VIC 3074, AUSTRALIA Phone 61-3-9464 2400 Fax 61-3-9464 2538
3	CHANGED TO SICK SENSORS	DRD:	15/1/99			
4	UPDATED SENSORS	DRD:	28/3/99			
5	PARTS LIST ADDED	DRD:	28/2/00			
6	UPDATED TERMINAL AND ADDED HOMING SENSORS	DRD:	15/3/01			
ISS. No.		DETAILS OF CHANGE		SCALE	NOT TO SCALE	DIMENSIONS IN MILLIMETRES SHEET 4 OF 5 SENSOR WIRING DRG.No. Z-6A215-01-1 REV. 6
				DRAWN BY	DRDI 6/9	
				CHECKED	P**** 1998	

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3	BLACK
4	WHITE
5	GREEN
6	RED
7	YELLOW
8	BLUE



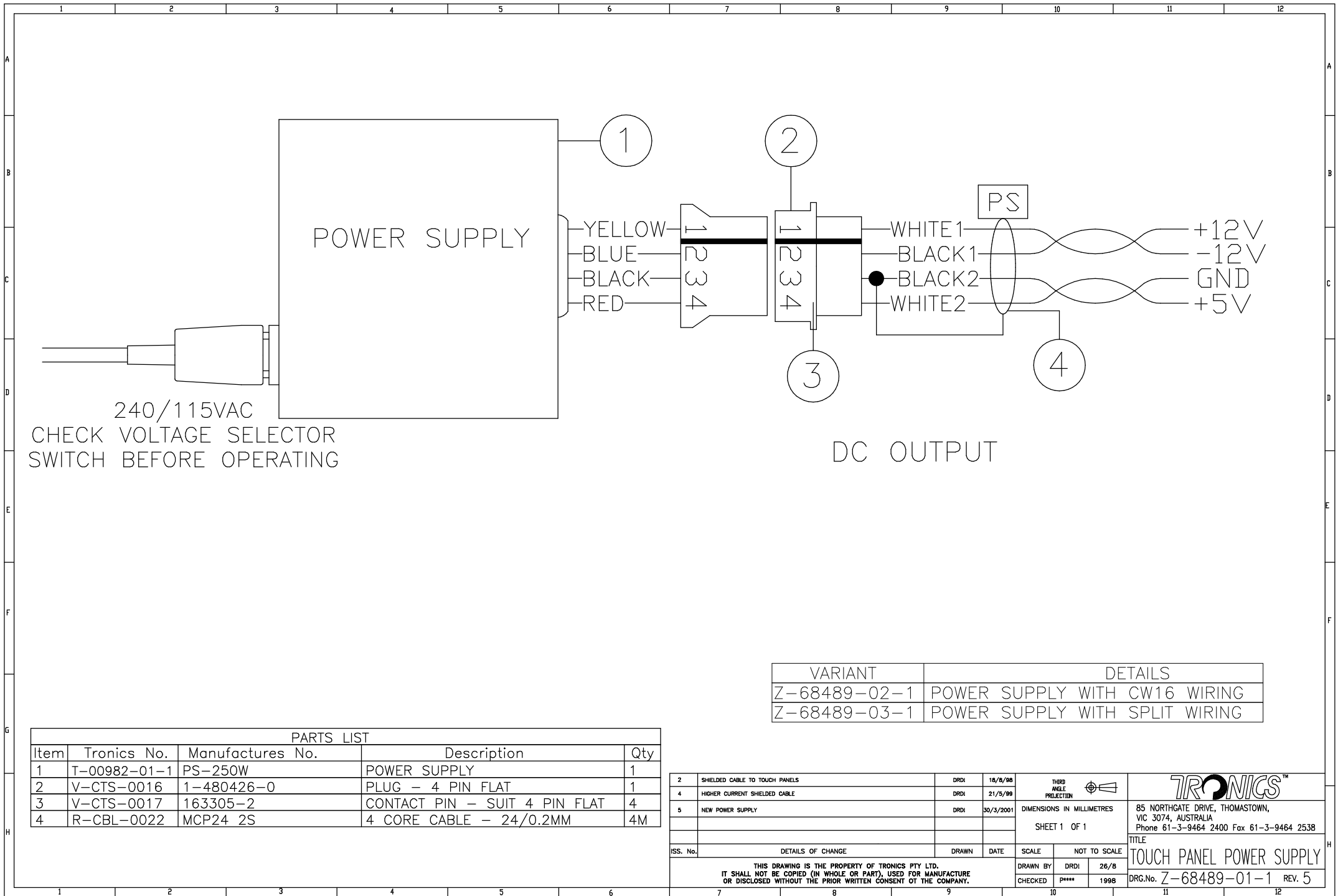
CABLE LENGTHS FOR LEAKER	
MAIN CONVEYOR	1M

CABLE LENGTH FOR STANDALONE	
LABEL HEAD	3M
AUXILLARY DRIVER	3M

CABLE LENGTHS FOR SERIES 3	
MAIN CONVEYOR	5.5M
WRAP	5.5M
OVERHEAD	9M
HEAD A	4M
HEAD B	4M
ALIGNER A	3.5M
ALIGNER B	3.5M
SPACER or SCROLL	3.5M
TOTAL	38.5M

PARTS LIST				
Item	Tronics No.	Manufactures No.	Description	Qty
1	V-CTS-0012	1-66504-0	RECEPTACLE CONTACT	8
2	V-CTS-0006	206433-2	8-PIN IN-LINE SOCKET	1
3	V-CTS-0005	206062-3	CABLE CLAMP	1
4	R-CBL-0018	MC14-6	6 CORE CABLE	*
5	V-CRP-0005	CE075	BLUE BOOTLACE	6

				THIRD ANGLE PROJECTION			 85 NORTHGATE DRIVE, THOMASTOWN, VIC 3074, AUSTRALIA Phone 61-3-9464 2400 Fax 61-3-9464 2538	
				DIMENSIONS IN MILLIMETRES	SHEET 1 OF 1			TITLE
						STEPPER DRIVER MOTOR CABLE		
ISS. No.	DETAILS OF CHANGE			DRAWN	DATE	SCALE	NOT TO SCALE	DRG.No. T-01023-01-1 REV. 1
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DRAWN BY	DRDI	28/3		CHECKED	P****	2001		



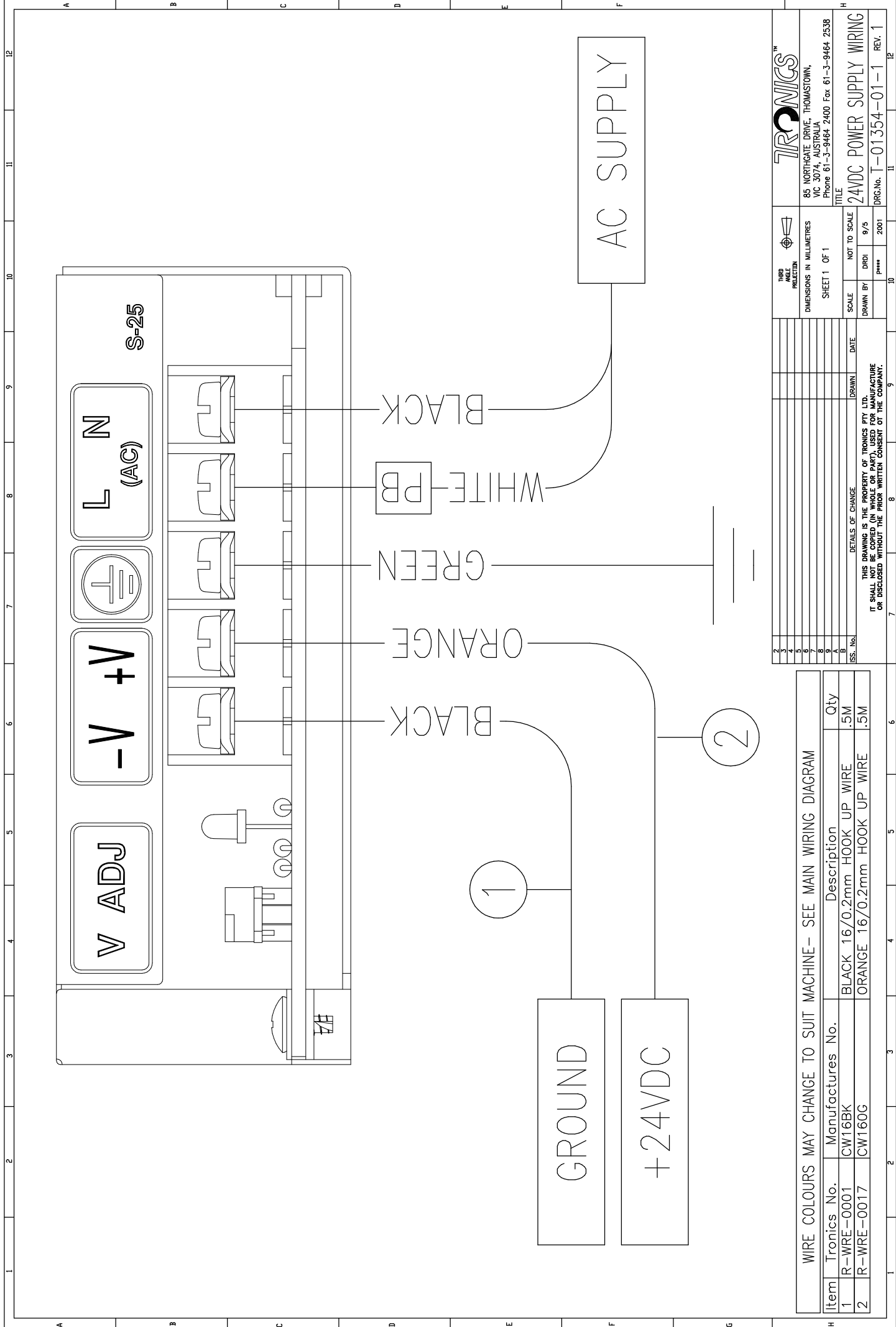
240/115VAC
CHECK VOLTAGE SELECTOR
SWITCH BEFORE OPERATING

DC OUTPUT

VARIANT	DETAILS
Z-68489-02-1	POWER SUPPLY WITH CW16 WIRING
Z-68489-03-1	POWER SUPPLY WITH SPLIT WIRING

PARTS LIST				
Item	Tronics No.	Manufactures No.	Description	Qty
1	T-00982-01-1	PS-250W	POWER SUPPLY	1
2	V-CTS-0016	1-480426-0	PLUG - 4 PIN FLAT	1
3	V-CTS-0017	163305-2	CONTACT PIN - SUIT 4 PIN FLAT	4
4	R-CBL-0022	MCP24 2S	4 CORE CABLE - 24/0.2MM	4M

2	SHIELDED CABLE TO TOUCH PANELS	DRDI	18/8/98	THIRD ANGLE PROJECTION		TRONICS™ 85 NORTHGATE DRIVE, THOMASTOWN, VIC 3074, AUSTRALIA Phone 61-3-9464 2400 Fax 61-3-9464 2538
4	HIGHER CURRENT SHIELDED CABLE	DRDI	21/5/99			
5	NEW POWER SUPPLY	DRDI	30/3/2001	DIMENSIONS IN MILLIMETRES		SHEET 1 OF 1 TOUCH PANEL POWER SUPPLY DRG.No. Z-68489-01-1 REV. 5
ISS. No.		DETAILS OF CHANGE		SCALE	NOT TO SCALE	
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				CHECKED	p****	1998

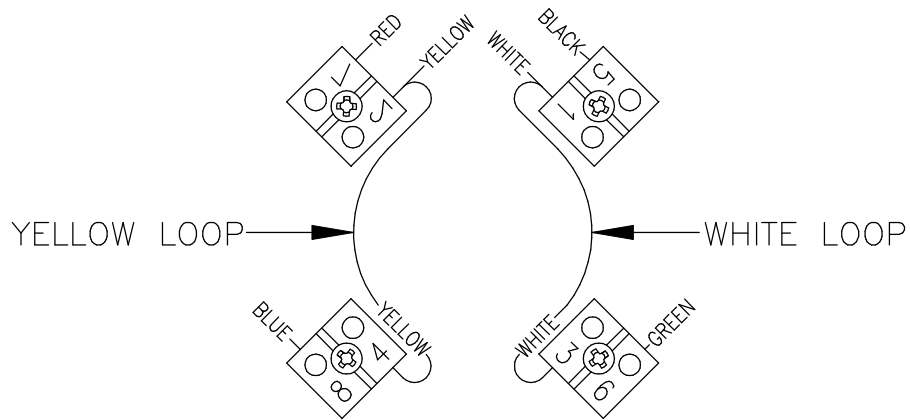
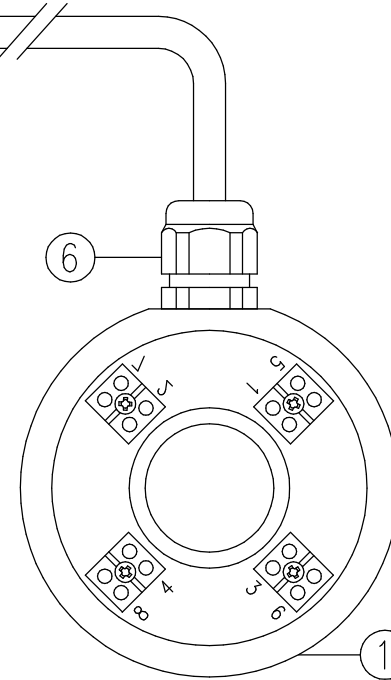
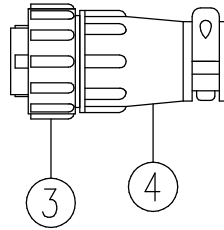
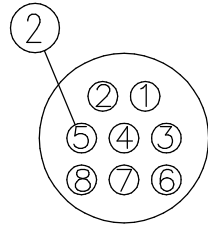


WIRE COLOURS MAY CHANGE TO SUIT MACHINE- SEE MAIN WIRING DIAGRAM

Item	Tronics No.	Manufactures No.	Description	Qty
1	R-WRE-0001	CW16BK	BLACK 16/0.2mm HOOK UP WIRE	.5M
2	R-WRE-0017	CW16OG	ORANGE 16/0.2mm HOOK UP WIRE	.5M

 THIRD ANGLE PROJECTION		 TRONICS™	
DIMENSIONS IN MILLIMETRES		85 NORTHGATE DRIVE, THOMASTOWN, VIC 3074, AUSTRALIA Phone 61-3-9464 2400 Fax 61-3-9464 2538	
SHEET 1 OF 1		TITLE 24VDC POWER SUPPLY WIRING	
SCALE	NOT TO SCALE	DRAWN BY	DRD 9/5
DETAILS OF CHANGE		DATE	2001
ISS. No.	A	THIS DRAWING IS THE PROPERTY OF TRONICS PTY. LTD. IT SHALL BE KEPT UNDER LOCK AND KEY AND NOT TO BE REPRODUCED OR DISCLOSED WITHOUT THE PRIOR WRITTEN CONSENT OF THE COMPANY.	
DRAWN BY P***		DRG.No. T-01354-01-1 REV. 1	

3	BLACK
4	WHITE
5	GREEN
6	RED
7	YELLOW
8	BLUE



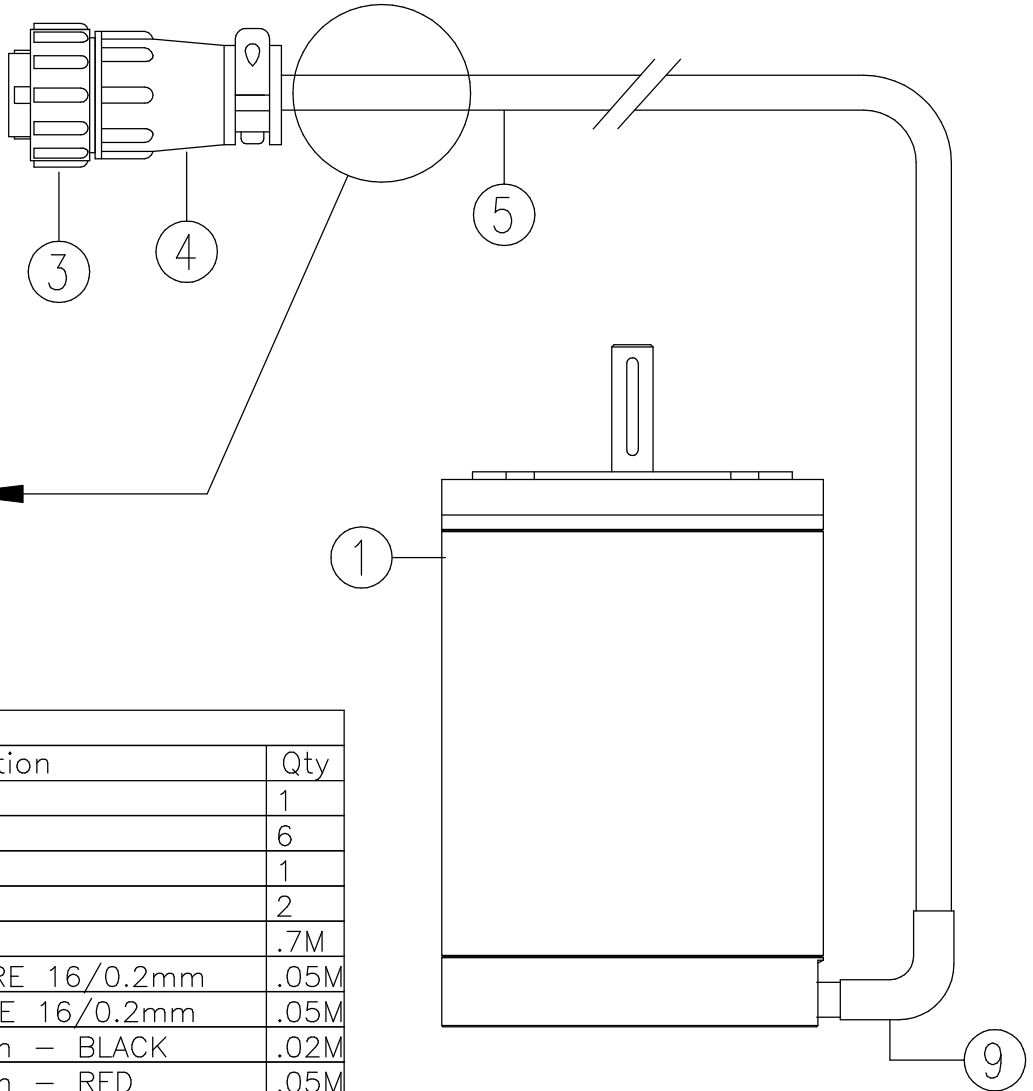
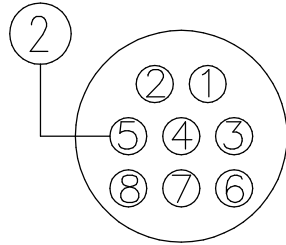
WIRING DETAIL

PARTS LIST

Item	Tronics No.	Manufactures No.	Description	Qty
1	V-MTR-0162	HY200 4270 710A8	MOTOR STEPPER	1
2	V-CTS-0015	1-66506-0	CONTACT PIN	6
3	V-CTS-0004	206434-1	PLUG - 8 PIN	1
4	V-CTS-0005	206062-3	CABLE CLAMP	2
5	R-CBL-0018	MC14-6	CABLE 6 CORE	.7M
6	V-GRM-0007	CG20	20MM GLAND	1

ISS. No.		DETAILS OF CHANGE		DRAWN	DATE	THIRD ANGLE PROJECTION		
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SCALE				NOT TO SCALE		DRAWN BY	DRDI	8/3
CHECKED				p****		2001		TITLE WIRING THE V-MTR-0162 DRG.No. T-00920-02-1 REV. 1

3	BLACK
4	WHITE - SEE BELOW
5	ORANGE
6	RED
7	BLUE - SEE BELOW
8	YELLOW



MODIFY 8 WIRE MOTOR TO 6 WIRES.

HEAT SHRINK SOLDER

WHITE

WHITE/ORANGE

WHITE/BLACK

BLUE

WHITE/RED

WHITE/YELLOW

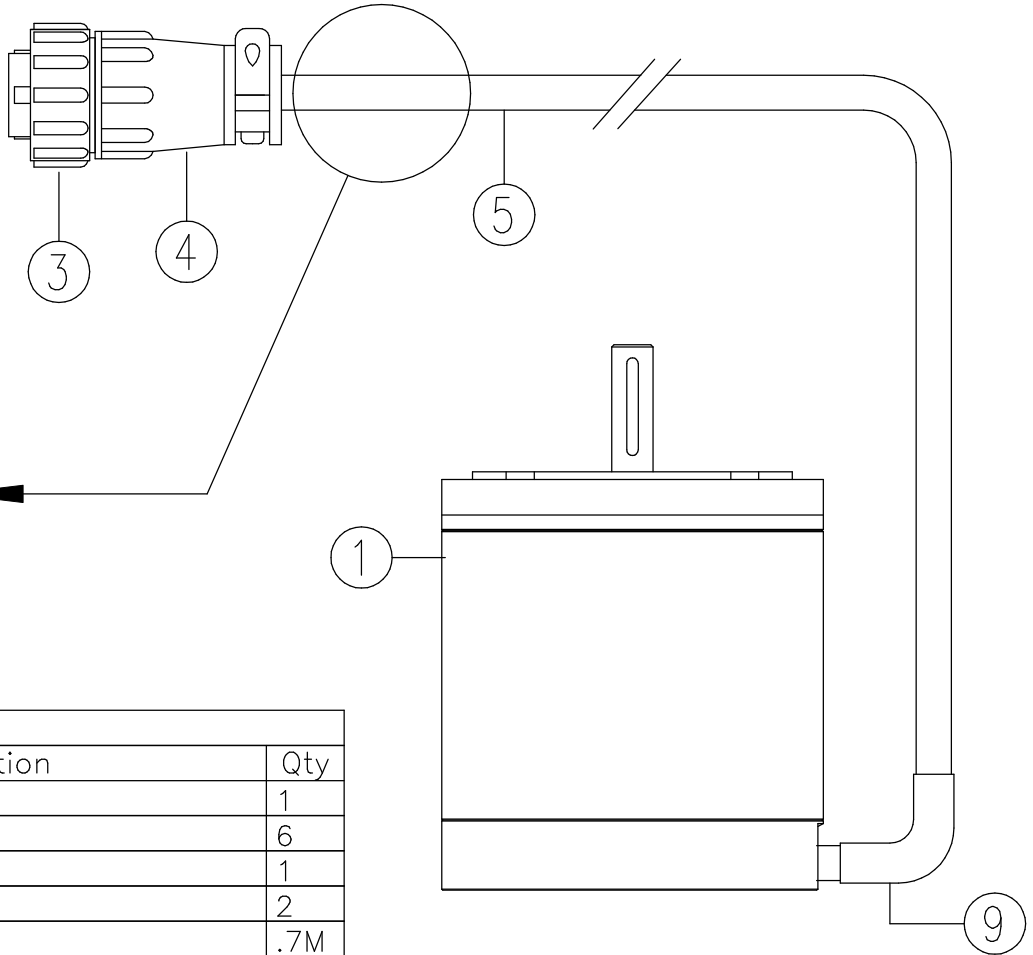
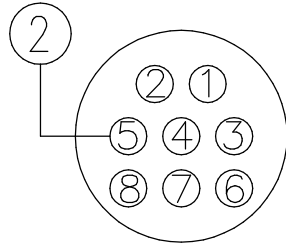
JOINS MUST BE STAGGERED IN RESPECT TO EACH OTHER

PARTS LIST

Item	Tronics No.	Manufactures No.	Description	Qty
1	V-MTR-0161	HN200 3451 0640 AXR08	STEPPER MOTOR	1
2	V-CTS-0015	1-66506-0	CONTACT PIN	6
3	V-CTS-0004	206434-1	PLUG - 8 PIN	1
4	V-CTS-0005	206062-3	CABLE CLAMP	2
5	V-SLV-0003	3/90T 7MM	BLACK SLEEVING	.7M
6	R-WRE-0029	CW16WH	WHITE HOOKUP WIRE 16/0.2mm	.05M
7	R-WRE-0006	CW16BL	BLUE HOOKUP WIRE 16/0.2mm	.05M
8	V-SLV-0010	TWHS4.8LTH	HEATSHRINK 4.8mm - BLACK	.02M
9	V-SLV-0017	TWHS9.5LRD	HEATSHRINK 9.5mm - RED	.05M

		THIRD ANGLE PROJECTION		 85 NORTHGATE DRIVE, THOMASTOWN, VIC 3074, AUSTRALIA Phone 61-3-9464 2400 Fax 61-3-9464 2538	
		DIMENSIONS IN MILLIMETRES			
		SHEET 1 OF 1		TITLE	
		SCALE		NOT TO SCALE	
		DRAWN BY		DRDI 8/6	
		CHECKED		p**** 2001	
ISS. No.		DETAILS OF CHANGE		DRAWN DATE	
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				DRG.No. T-00921-02-1 REV. 1	

3	BLACK
4	WHITE - SEE BELOW
5	ORANGE
6	RED
7	BLUE - SEE BELOW
8	YELLOW



MODIFY 8 WIRE MOTOR TO 6 WIRES.

HEAT SHRINK SOLDER

JOINS MUST BE STAGGERED IN RESPECT TO EACH OTHER

PARTS LIST

Item	Tronics No.	Manufactures No.	Description	Qty
1	V-MTR-0160	HN200 3438 0430 AXR08	STEPPER MOTOR	1
2	V-CTS-0015	1-66506-0	CONTACT PIN	6
3	V-CTS-0004	206434-1	PLUG - 8 PIN	1
4	V-CTS-0005	206062-3	CABLE CLAMP	2
5	V-SLV-0003	3/90T 7MM	BLACK SLEEVING	.7M
6	R-WRE-0029	CW16WH	WHITE HOOKUP WIRE 16/0.2mm	.05M
7	R-WRE-0006	CW16BL	BLUE HOOKUP WIRE 16/0.2mm	.05M
8	V-SLV-0010	TWHS4.8LTH	HEATSHRINK 4.8mm - BLACK	.02M
9	V-SLV-0017	TWHS9.5LRD	HEATSHRINK 9.5mm - RED	.05M

		THIRD ANGLE PROJECTION		 85 NORTHGATE DRIVE, THOMASTOWN, VIC 3074, AUSTRALIA Phone 61-3-9464 2400 Fax 61-3-9464 2538	
		DIMENSIONS IN MILLIMETRES			
		SHEET 1 OF 1		TITLE	
		SCALE		NOT TO SCALE	
ISS. No.		DETAILS OF CHANGE		DRAWN DATE	
				DRAWN BY DRDI 8/6	
				CHECKED P**** 2001	
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