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Durt Tracker Doctor Blade Primary Cleaner

Installation Operations Manual

Revision	Description of Change	Changed By	Date
A	Added Final Checklist	AS	28/5/07
B	General Review and Update; Added Warranty Registration	TT/AS	02/11/07
C	Updated Melbourne Address & Removed SA Address	SH	3/08/09
D	Drawings updated	CW	02/10/09
E	Final Checklist Updated Items 4 & 5 Reversed	SH	15/04/10
F	Tensioner information Updated	KOR	25/5/11
G	Updated Drawings	KOR	17/04/12
H	Removed Mts Isa contact details	KO	12/6/12
I	Updated format of manual	KO	5/2/13
J	Updated office details	KO	10/3/14
K	Updated ESS & Martin Logo & Karratha contact details	KO	4/6/14
L	Updated drawing F0035 & inserted F0495	KO	3/11/14

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WARRANTY NOTE

ESS* WARRANTS** the **Durt Tracker Doctor Blade Primary Cleaner** to be free of defects both in materials and workmanship for a period of 12 months from the date of despatch of the product from the ***ESS factory. The warranty given by ***ESS*** in this regard will extend only to replacing or repairing product shown to be defective.

The warranty also is subject to the following restrictions:

(a) Installation of the product contrary to the instructions contained in the supplied manual will void such warranty absolutely;

(b) The warranty will not extend to any liability for injuries incurred and which result from the use of the product contrary to the instructions in the manual;

(c) Save as prescribed by law, ***ESS*** will not be liable for any damage sustained by a purchaser or a third party by way of consequential loss arising out of defects in the product.

You are asked to note that ***ESS*** offers purchasers a service whereby either:

(a) It will install the product and certify the correctness of such installation, or

(b) Certify the correctness or otherwise of the installation of the product by third parties.

This certification service is designed to ensure that you obtain the full benefit of the ***ESS*** warranty hereby provided. If you would like to take advantage of the installation certification service provided, please contact ***ESS*** regarding the service.

Refer to the Final Checklist at the back of this manual.

Visit the ***ESS*** website www.esseng.com.au to register your product warranty.

INDEX

SECTION 1 - SAFETY

The DURT TRACKER is designed to be quickly and easily serviced by appropriate personnel.

Under no circumstances should servicing or installation of the cleaner be carried out whilst the belt is in operation.

The conveyor must be shut down and locked out before any person enters or reaches into the conveyor enclosure.

Ensure that only suitably qualified and trained personel install and service this product. Ensure that all site and statutory safety procedures are followed.

SECTION 2 - INTRODUCTION

The Durt Tracker Doctor Blade is a conveyor belt Primary Cleaner.

It is normally mounted on the face of the conveyor head pulley and is designed to peel off the thick layer of loosely adhering material that often accounts for 85%-95% of carryback.

The Durt Tracker Doctor Blade is normally used in conjunction with at least one secondary cleaner, such as the Inline Premium Secondary Cleaner, and often with a water spray system.

The blade material is one piece cast urethane. These segmented blades can be easily removed by sliding on and off the mainframe track.

Important points to remember concerning the Durt Tracker Doctor Blade are:

1. The cleaner is directional - it will only clean a belt travelling in the design direction - however, the cleaner will not be damaged or affected by belt direction reversal.

2. The cleaner is suitable for use on crowned head pulleys and damaged or grooved belts. The urethane blades quickly conform to the belt profile.

3. For slow moving belts, the cleaner should be positioned lower on the head pulley to ensure the blades are clear of the main material flow.

4. For belts greater than 1500mm wide a tensioner is required on both sides to ensure equal pressure across the cleaning face.

5. For belts greater than 1800mm wide, or for certain heavy duty applications, a mainframe stiffener is required.

SECTION 3 - PREPARATION FOR INSTALLATION

1. CHECK INSTALLATION DRAWINGS - Ensure that you have the correct drawings and equipment for your conveyor(s).

2. PRE-ASSEMBLE THE CLEANER(S) AND MOUNTS - Do this in your workshop or similar free area, rather than at the Conveyor. This will enable you to:

- verify all required equipment is present
- familiarise yourself with the cleaner assembly
- allow you to plan the installation, reducing installation time.

3. ASSEMBLE THE NECESSARY TOOLS & SAFETY EQUIPMENT REQUIRED FOR THE INSTALLATION

4. OBSERVE THE CONVEYOR WHILE RUNNING AND CONVEYING MATERIAL -

- Observe the material trajectory
- Observe the belt direction - does it reverse or roll back?
- Observe the belt splice condition
- Does the belt run true, or track off to one side?
- Is the Head Pulley out-of-round?

Consult ***ESS*** if any **UNUSUAL** conditions are observed in the above. These conditions may result in recommendation of a different installation position or even a different cleaner.

SECTION 4 - INSTALLATION

DANGER! Conveyor must be shut down and locked out before any installation or service work is performed.

WARNING! If installation is to be done in an enclosed area, test atmosphere for gas level or dust content. Follow all welding and safety guidelines.

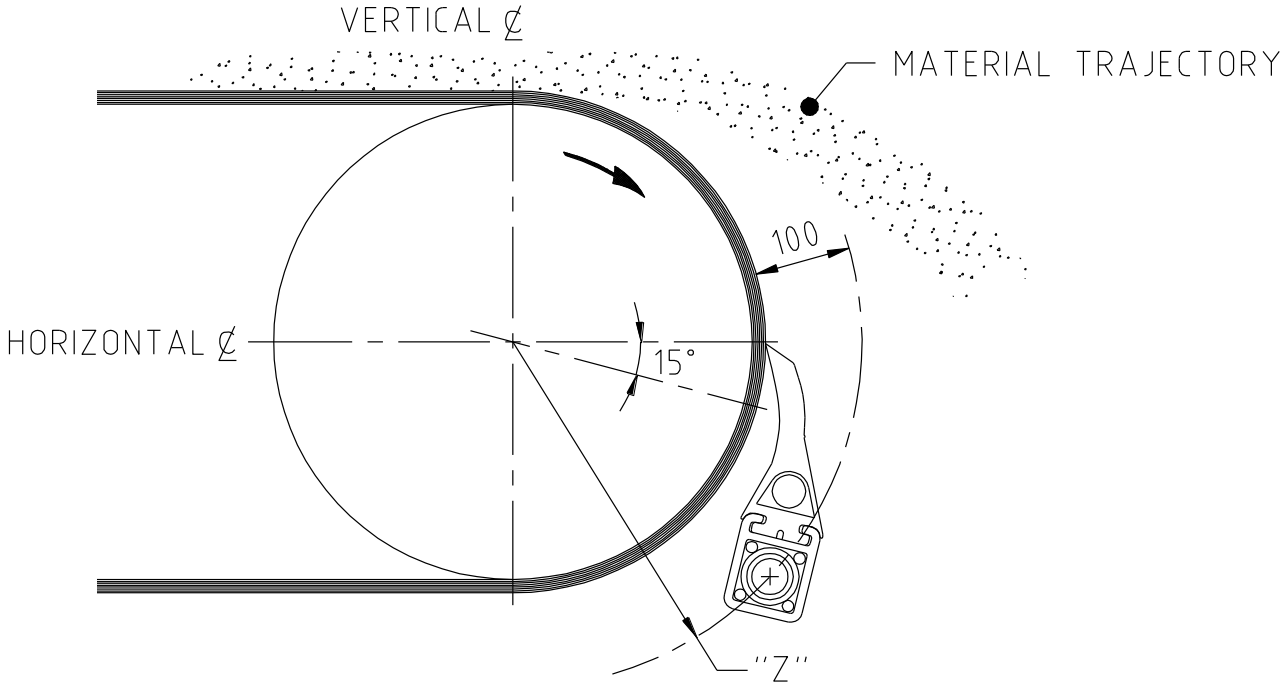
NOTE 1 For original equipment installation, where cleaner cutouts and brackets have been fabricated into the chute during construction, ignore steps 1 and 2 .

NOTE 2 For installation on enclosed head pulley chutework, draw all dimension lines on chute wall. In applications where head pulley is not enclosed, custom designed brackets are necessary to ensure correct cleaner position.

Step 1. **Locating Mainframe's Centreline**

Using the typical installation drawing supplied in this manual, locate the mainframe's centreline on both sides of the conveyor. Measure radially 100mm from the face of the belt. From this point draw an arc using the pulley's centreline as the centre point. The centreline of the mainframe can be located anywhere along the radius as long as the blades do not lie in the material's trajectory. The optimum position is for the blade tips to be between 0° and 15° below the horizontal centreline.

NOTE: Material trajectory is defined as the path of the material being discharged from the belt.



Verify Mainframe Position before Proceeding

Position the selected tensioner/mount assembly over the centreline marks for the mainframe. Verify that the mounts fit, and that adequate room is available to tension the cleaner. If used, position the CYA door frame to ensure it fits. If mounts or door frame interfere with structural members, it may be necessary to locate the cleaner elsewhere on the 100mm offset radius. If the tensioner only interferes, remember that the tensioner can be rotated to several different mounting positions by removal of the four countersunk screws. Once mounting position is confirmed, proceed.

Step 2. At the selected mainframe mounting positions, mark out and cut the mainframe and mount fastener holes (if required) in each side of the chute. Refer to the installation drawing at the back of this manual.

If a CYA door is to be installed, use the door frame as a template to mark the door cut-out on the operator side. Proceed to cut the door hole, but ensure that the marked centre lines of the cleaner are not totally removed - you will need these to position the mainframe.

If a stand-off bracket is to be bolted over a CYA door, the mounting holes also have to be cut.

Step 3. The Durt Tracker Mainframe is a combination of extruded polyethylene, steel tubing, and telescoping mounting pipes. The telescoping mounting pipes allow precise length adjustment each side, removing the need for site trimming.

Remove the blades if they have been mounted on the mainframe. Do this by loosening the blade lock screw from the end to be the operator side. Remove blade lock and blades by sliding them out of the track end using the pull-strap.

Insert the mainframe without the blades through the inspection window. Pass one end of the mainframe telescoping pipe through the mount hole on the far side, then the other through the operator side mount.

Step 4 Loosen the lock screws on the bottom of the track, and either extend or retract the telescoping pipe ends as required.

Slide the operator and far side mounts on to the telescoping pipes, then tack weld, clamp, or loosely bolt the mounts to the chute walls. If a stand-off bracket is to be used over a CYA door, and the cutout has been made, fit the operator side mount to the appropriate stand-off bracket, and tack weld, clamp or bolt the stand-off bracket in the desired position.

Position the orange extrusion so that it is centred on the belt. Once centred, lightly tighten lock screws on the bottom of the track. This will hold the telescoping pipes in place. This procedure will need to be repeated at the final step.

(Note: Slide the CYA door frame loosely on to the pipe end before the mount, to save later mount removal).

Step 5. Check the position of the mainframe.

- Is the centre line of the mainframe positioned 100mm from the belt face?
- Is the mainframe level, or equal to the pulley shaft?
- Is there at least 152mm clear at one end of the track to remove and replace blades?

Ensure the far side blade lock is fitted. The lock must be sufficiently secure to hold the blades in place. Lay the pull-strap in the track with the smaller looped end toward the far side blade lock. Slide blades on top of pull-strap and into track. Place operator side blade lock in track, and secure to finish blade installation. By hand, rotate the pipe until the blade tips lightly contact the belt.

- Do the blade tips all touch the belt at the same time?

(Note: Slight inconsistencies in belt thickness, and blade shape, accounting for small gaps between blade and belt, will quickly be taken up by blade flexure on tensioning).

For crowned head pulleys, ensure that the outside blades on each side are an equal distance from the belt, whilst the centre blade is touching. Again, these gaps will quickly close on tensioning.

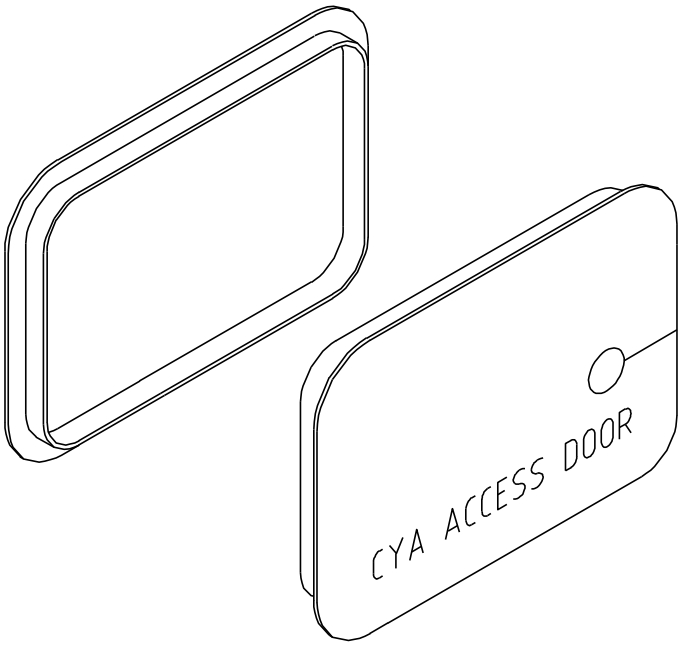
If any questions above have been answered “NO”, take appropriate action to correct the installation. If all questions are answered “YES”, proceed.

Step 6. Fully weld or bolt the cleaner mounts, brackets and CYA door frame to the chute wall. If not already done, fit the tensioner assembly(ies)to the mount(s). Centre the blades on the belt. All ***ESS*** cleaners are designed to clean an area narrower than the actual belt width. This is to allow for a small amount of lateral movement of the belt and to protect the edge of the belt from possible damage. Loosen the lock screws on the bottom of the track and adjust the telescoping pipe ends to the required length. Firmly tighten the lock screws.

Lateral movement of the mainframe is prevented by the tensioner’s locking hubs, or a lock collar on the far side mount when only a single tensioner is used(i.e. on belt widths less than 1600mm). Lock these items in position, allowing about 1-2mm of end float in the cleaner mainframe.

Step 7. **WHERE A CYA DOOR IS FITTED.**

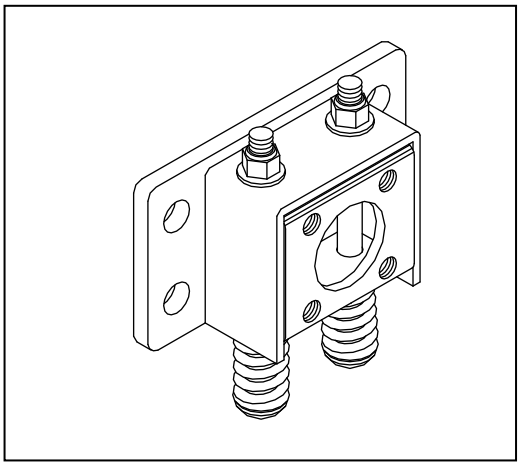
Measure the position of the mainframe in relation to the CYA door frame. Mark this position on the CYA door rubber cover, and cut a neat hole, approximately 50mm diameter in the cover. Cut a straight line from this hole to the nearest edge of the rubber cover. Install the rubber cover over the mainframe pipe, and push into place on the door frame. Anchor the loose end of the cover lanyard.



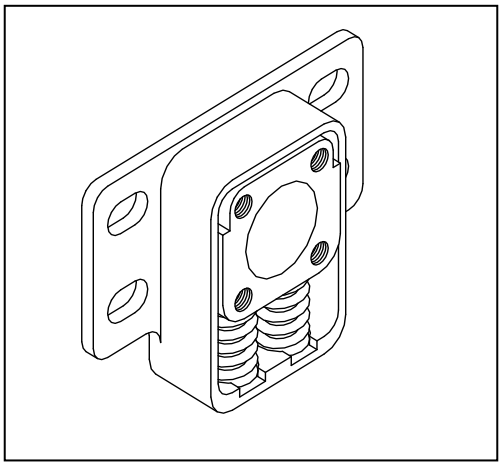
SECTION 5 - OPERATION OF THE TENSIONERS

ESS Durt Tracker Doctor Blade Cleaners are mounted to the conveyor structure via Shock Mounts or Flex Mounts.

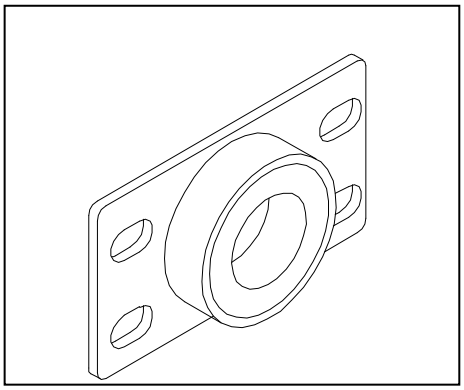
The Shock Mount has a set of four threaded holes as shown in Figure 1 and Figure 2.
The Flex Mount is a steel mount plate with a urethane insert as shown in Figure 3.



Mild Steel Shock Mount
FIG. 1



Stainless Steel Shock Mount
FIG. 2



Flex Mount
FIG. 3

5.1 – SPRING TENSIONER - INTRODUCTION

The **40 NB Spring Tensioner** is a simple, robust and reliable blade tensioning unit.

The Spring Tensioner can be assembled to tension in either the clockwise or anti-clockwise direction and has multiple mounting positions for each direction.

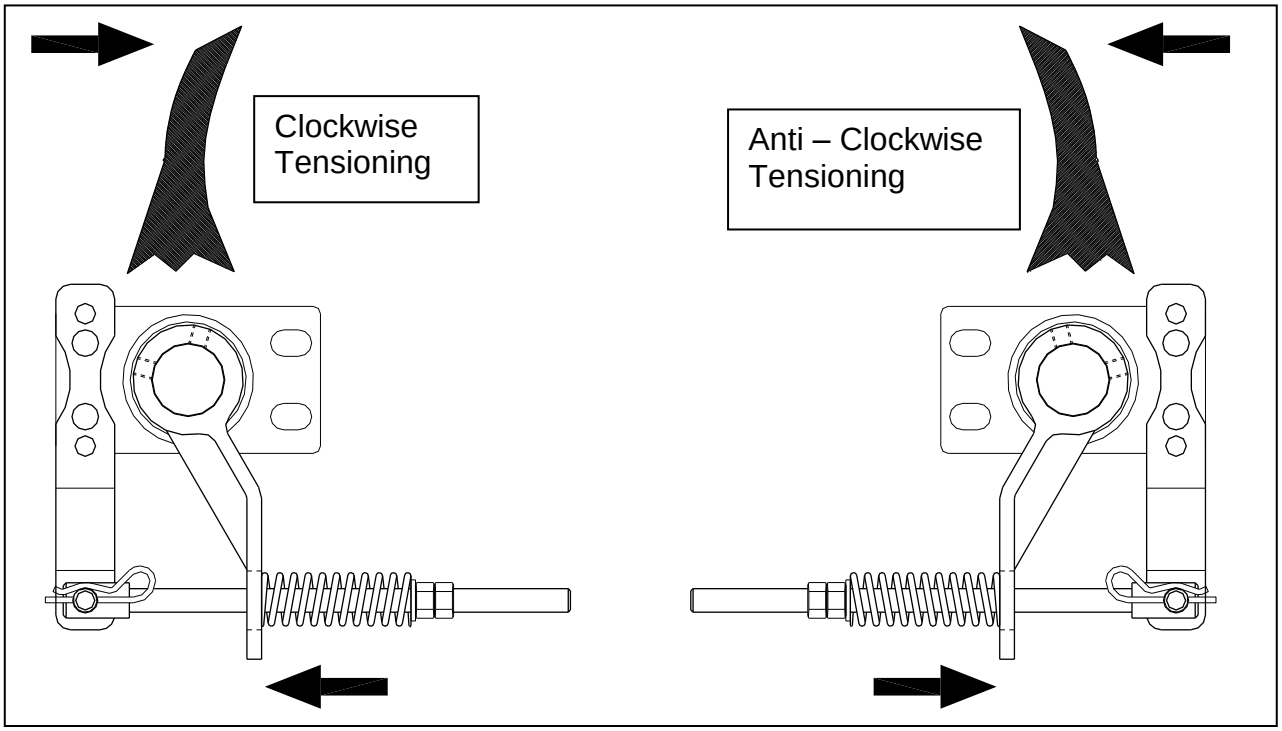


Figure 1

The Spring Tensioner is available in two variations:

- Part number 09010309 is a Spring Tensioner Assembly suitable for attachment to a Primary Cleaner Shock Mount. This is often used as a retrofit to replace either a superseded ***ESS*** Pin Tensioner, or an ***ESS*** Air Tensioner.

- Part number 09010310 is a Spring Tensioner Assembly suitable for attachment to a Primary Flex Mount (see Figure 1). This is the most common mount and tensioner combination for a new cleaner, and is also used to replace the superseded ***ESS*** Counterweight Tensioner.

Adding an “S” as a suffix to the above part numbers denotes a stainless steel model.
Both types are available as a set with the mounts included. Where a complete cleaner is ordered, it would normally be supplied with the Flex Mounts as the lower cost option.

5.1.1 Installation on Shock or TA Mount

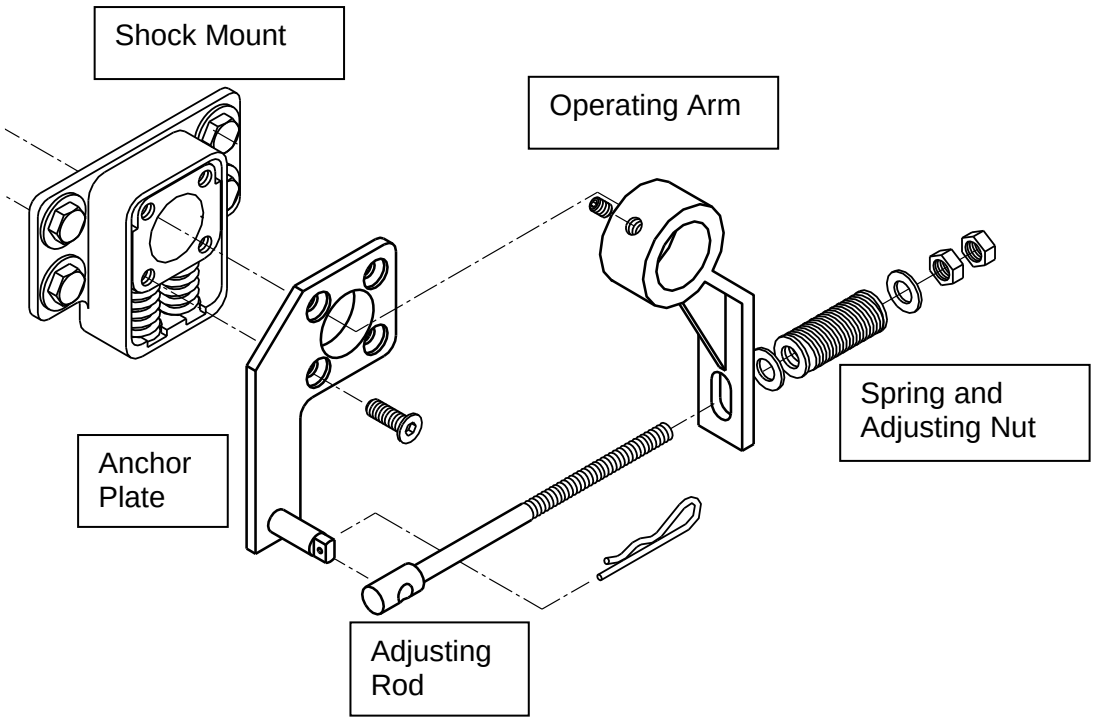


Figure 2

Step 1

Fit the anchor plate to the mount using the four countersunk head screws. Ensure that the plate is in the correct orientation for the desired tensioning direction. The anchor plate can be flipped over for the opposite direction, but the anchor pin must be removed and installed on the other side. The anchor plate and the tensioner assembly can also be rotated to four different angles through 360° to suit site restrictions.

Step 2

Slide the operating arm onto the cleaner mainframe, again ensuring that it is in the correct orientation for the desired tensioning direction.

Step 3

Insert the threaded end of the adjusting rod through the operating arm slot, with the clevis end toward the anchor plate.

Step 4

Fit the adjusting rod clevis onto the pivot plate pin and secure with clip provided.

Step 5

Fit spring, nut and locknut to the threaded end of the adjusting rod. Only run the adjusting nut a few turns onto the adjusting rod. Do not try to adjust or compress the spring yet.

Step 6

Using a pipe wrench or similar, rotate the cleaner until the blade tips are lightly touching the belt. With the operating arm fully retracted against the spring, lock the operating arm onto the cleaner mainframe by tightening the two lock screws. Ensure that the operating arm hub is 1-2mm clear of the mount to allow free rotation without excessive lateral movement of the mainframe.

Step 7

Whilst still supporting the cleaner with the pipe wrench, adjust the nut (not locknut) against the spring until the spring just begins to compress. Release the pipe wrench.

Step 8

For belts 1500mm and wider, tensioners are fitted to both sides. Repeat above procedure for other side. For cleaners with one tensioner only, fit the locking collar onto the far end of the cleaner mainframe, again locking it into position 1-2mm clear of the mount.

5.1.2 Installation on Flex Mount

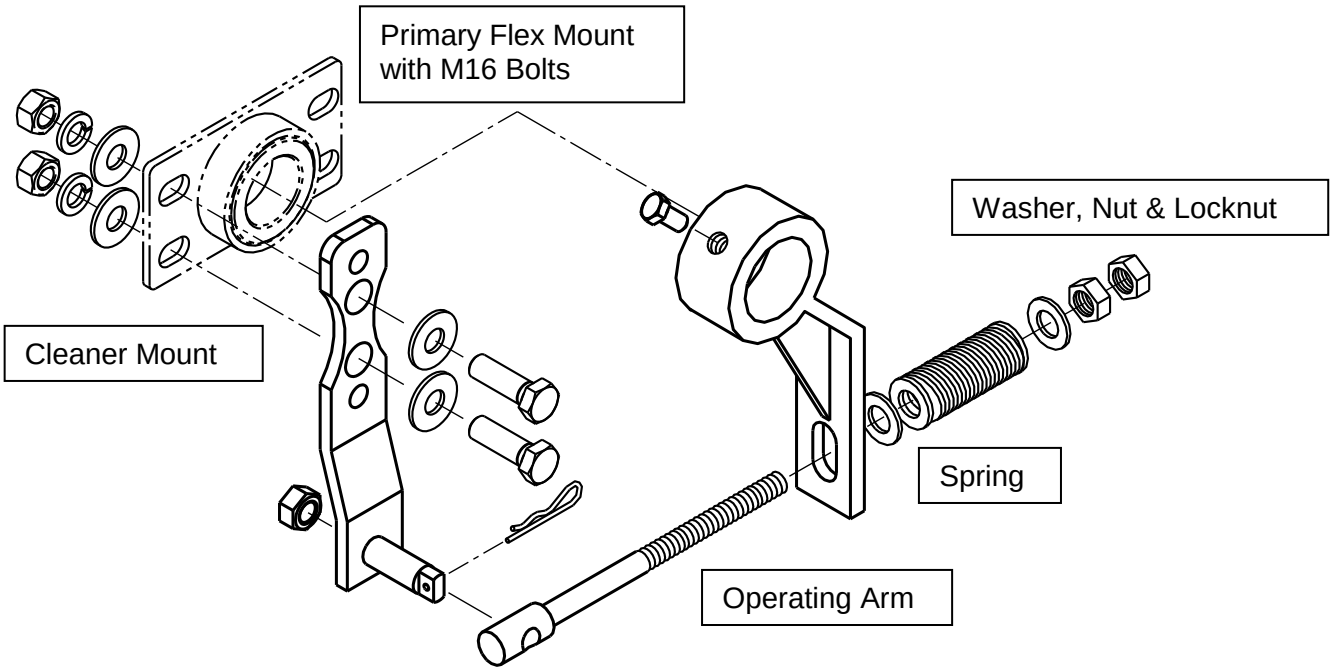


Figure 3

Step 1

Fit the anchor plate to the mount using two of the existing mount bolts. There are M16 bolt holes provided for the Primary Flex Mount and M12 bolt holes for the Secondary Flex Mount. Ensure that the plate is in the correct orientation for the desired tensioning direction. The anchor plate can be installed on the opposite side mount holes for tensioning in the opposite direction. The anchor plate and tensioner assembly can also be turned upwards to suit site restrictions.

Step 2

Slide the operating arm onto the cleaner mainframe, again ensuring that it is in the correct orientation for the desired tensioning direction.

Step 3

Insert the threaded end of the adjusting rod through the operating arm slot, with the clevis end toward the anchor plate.

Step 4

Fit the adjusting rod clevis onto the pivot plate pin and secure with clip provided.

Step 5

Fit spring, nut and locknut to the threaded end of the adjusting rod. Only run the adjusting nut a few turns onto the adjusting rod. Do not try to adjust or compress the spring yet.

Step 6

Using a pipe wrench or similar, rotate the cleaner until the blade tips are lightly touching the belt. With the operating arm fully retracted against the spring, lock the operating arm onto the cleaner mainframe by tightening the two lock screws. Ensure that the operating arm hub is 1-2mm clear of the mount to allow free rotation without excessive lateral movement of the mainframe.

Step 7

Whilst still supporting the cleaner with the pipe wrench, adjust the nut (not locknut) against the spring until the spring just begins to compress. Release the pipe wrench.

Step 8

For belts 1500mm and wider, tensioners are fitted to both sides. Repeat above procedure for other side. For cleaners with one tensioner only, fit the locking collar onto the far end of the cleaner mainframe, again locking it into position 1-2mm clear of the mount.

5.1.3 – Spring Tensioner Adjustment Procedure.

Note: The Spring Tensioner is mounted externally to the conveyor chute, and as such is normally able to be adjusted with the conveyor in service. Under no circumstances should any person reach into or enter a conveyor enclosure while the belt is running. For any conveyor belt cleaner service, maintenance or adjustment that requires entry to the conveyor enclosure by any part of the body, first ensure that the conveyor is shut down and locked out to site safety procedures.

Warning: Contact with moving conveyor components can result in severe injury or death.

To adjust the Spring Tensioner:

- Loosen the locknut away from the adjusting nut on the adjusting rod.
- Turn the adjusting nut until the cleaner blades are pressed against the belt, and the spring begins to compress.
- Continue until the spring is compressed to the height shown in the following table 1. Ensure that the correct height is used for the appropriate belt cleaner and belt width. If in doubt, contact ***ESS***.
- Once the correct spring compression is achieved, run the locknut up against the adjusting nut, and use two wrenches to tighten the nuts together.
- For cleaners with dual tensioners, repeat this procedure on the opposite side.

Table 1

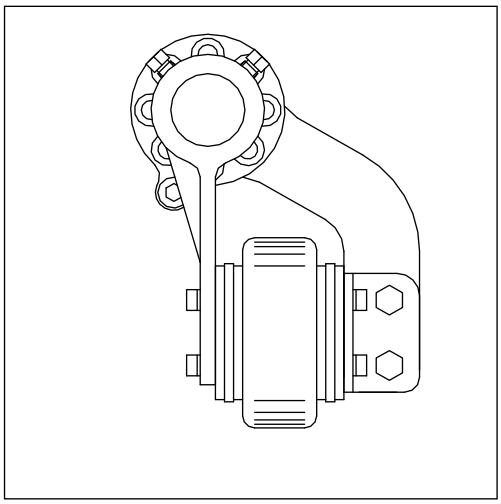
	Primary Cleaners	
Belt Width	**Spring Length**	**No. of Turns**
450	95	2.5
600	92	3.75
750	92	3.75
900	89	5
1050	89	5
1200	86	6.25
1350	83	7.5
1500	92 **	3.75
1600	89	5
1800	89	5
2000	86	6.25
2200	86	6.25
2400	86	6.25

** Note: Cleaners for belts 1500 and wider have dual tensioners. The settings shown are for each tensioner.

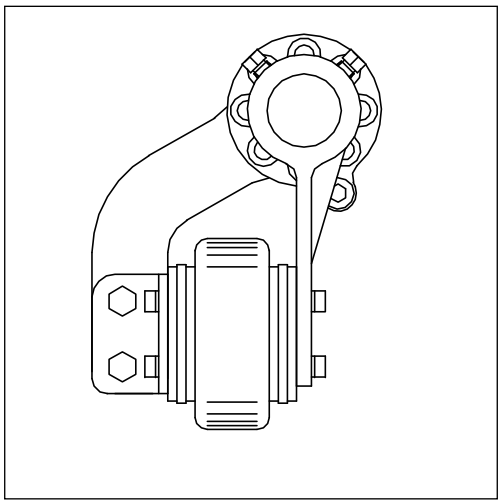
5.2 AIR TENSIONER - INTRODUCTION

The Air Tensioner is a robust tensioner capable of delivering very precise blade to belt contact force, whilst allowing the cleaner to respond and absorb belt or pulley irregularities.

The Air Tensioner can be assembled to tension in either direction and can be rotated to several positions through 360° to overcome site restrictions. Ensure that the tensioner is assembled to operate in the desired direction before mounting onto the mainframe.



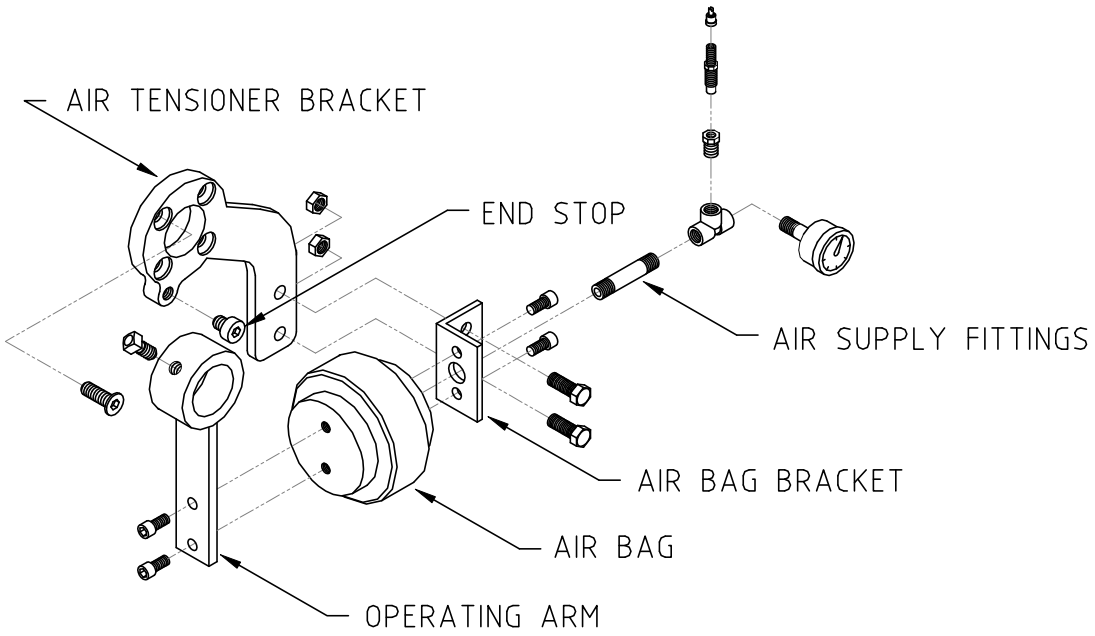
Clockwise Tensioning



Anti-clockwise Tensioning

ASSEMBLY STEPS

The Air Tensioner assembly is normally despatched from the factory fully assembled and may only require the installer to slide the assembly onto the mainframe (as step 4) and secure the Air Tensioner bracket to the Shock Mount using the 4 countersunk head screws (as step 1). Disassembly will only be required if the tensioner is set-up to tension in the wrong direction.



Step 1 Fit the air tensioner bracket to the Shock Mount using the 4 countersunk head screws.

Step 2 Attach the airbag bracket to the air tensioner bracket.

Step 3 Bolt the blank end of the airbag to the operating arm.

Step 4 Slide the operating arm onto the mainframe with the airbag towards the airbag bracket side of the mount.

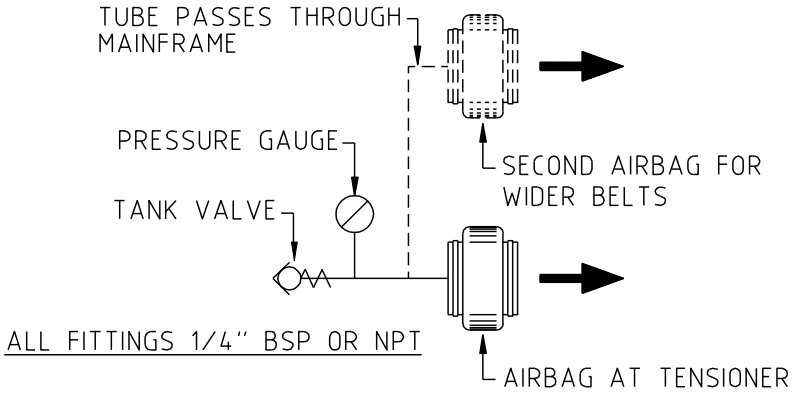
Step 5 Attach the open end of the airbag (this end has 3 tapped holes) to the airbag bracket.

Step 6 **No** air supply fittings should be connected at this point. Using a pipe wrench or similar, rotate the cleaner mainframe until the blade tips lightly touch the belt surface at the cleaning position. With the airbag fully compressed, secure the operating arm to the cleaner using the locking screws. Allow 1-2mm clearance between the operating arm and the Shock Mount to enable free rotation whilst minimising lateral movement.

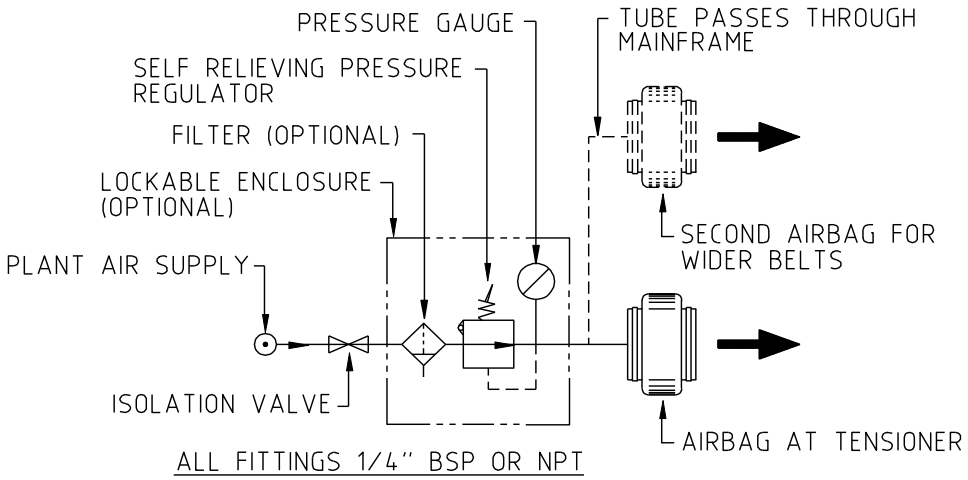
Step 7 For cleaners on belts 1600mm or wider, repeat the above for the far side. For belts 1500mm and less, simply fit the lock collar onto the far side of the cleaner, again allowing 1-2mm lateral clearance.

Step 8 The cleaner is now ready for attachment of the air supply system. Connect all air fittings using a good quality liquid compound or “Gas Seal” thread tape.

System 1 - NO PLANT AIR AVAILABLE



System 2 - PLANT AIR AVAILABLE



Step 9 Once all fittings are connected and secured, the Air Tensioner may be pressurised. Pressures are indicated in the following table.

NOTE: Use these inflation pressures as a rough guide only. Belt speed, material, number of cleaners on belt and acceptable blade wear should be taken into account when setting pressures. DO NOT EXCEED 275 kPa (40 psi).

IF YOU HAVE NEED OF ASSISTANCE, CONTACT YOUR LOCAL ***ESS*** OFFICE.

BELT WIDTH	PRESSURES	
	KPa	PSI
450	34	5
600	48	7
750	55	8
900	69	10
1050	83	12
1200	83	12
1350	90	13
1500	90	13
1600	55	8
1800	62	9
2000	69	10
2200	83	12
2400	97	14

* - Dual tensioners fitted - pressure per tensioner given.
(Generally connected by balance tube.)

SECTION 6 - COMMISSIONING

Step 1. BACK THE CLEANERS AWAY FROM THE BELT

Double check the items in previous sections - safety - preparation - installation.

Step 2. IS THE BELT EMPTY?

Make sure there are no foreign objects such as tools or clean-up debris left on the belt. They may damage the belt cleaners or clog up the conveyor systems.

Step 3. PLACE CONVEYED PRODUCT ON THE BELT

Place some material on the belt before starting up system. This helps to quickly “Wear in” the blades and reduce the initial friction between the belt and the blades. Handfuls of conveyed material spaced along the belt will do. The belt may also be moistened with water.

Step 4. START THE CONVEYOR

Follow the established safety rules.

Step 5. ADJUST DURT TRACKER DOCTOR BLADE CLEANER EVENLY ONTO THE BELT

Refer to Section 5 - Operation of the Tensioners.

Adjust the cleaner so that all of the blades are touching the belt with even pressure - DO NOT OVER-ADJUST. Each blade should be in contact and flexing back and forth with the irregularities of the belt surface. The Doctor Blade is designed to lightly ride on the surface of the belt and remove a large percentage of the carryback. Excessive pressure unnecessarily reduces the life of the blades without any increase in cleaner efficiency.

Step 6. OBSERVE THE CLEANING ACTION

Using a light, observe the belt and the action of the cleaner. Place material on the belt. Look for blades that are not touching the belt. Run for 5 minutes to get a good idea of the action and the effect of the splices on the belt cleaner.

Step 7. DEMONSTRATE THE SYSTEM TO THE OPERATING SUPERVISORS AND CREW

Call the supervisors responsible for maintenance and operation to the site. Make a short run of the system, putting material on the belt. Show the operator how to adjust and operate the system.

Step 8. SECURE THE SYSTEM FOR PRODUCTION

Follow plant procedure to secure the conveyor for actual production.

SECTION 7 - OPERATOR TRAINING

The decision to purchase ***ESS*** cleaning equipment has put within easy reach the reality of a clean plant. The last step is the correct training of personnel to maintain and service the equipment or employ ***ESS*** on a contract basis to maintain the cleaners so that they remain at optimum efficiency.

The benefits of efficient cleaners outweigh the cost of maintaining the cleaners many times.

If you wish to have your cleaning system maintained on a regular contract basis, contact ***ESS***. If not, train your own personnel as follows:

1. Adhere to all local safety rules.

2. Give a “Hands On” instruction with the conveyor system shut down.

3. Give a “Hands On” instruction with the conveyor system running.

4. All service must be recorded and given to a person of responsibility.

5. Encourage the person being trained to look for possible problems developing on the system, eg. belt tracking excessively, tears or damage to belt, seized idlers, missing bolts, etc.

   A warning to the maintenance department to rectify small problems can save the company a lot of money in repairs and production costs.

6. Impress how important it is to maintain and service the cleaners correctly.

SECTION 8 - ROUTINE MAINTENANCE AND SERVICE

Regular inspection and servicing is the key to effective conveyor belt cleaning. It is recommended that the cleaner be inspected once per week. Actual service intervals will vary considerably from plant to plant.

CAUTION! DO NOT REACH INSIDE THE CONVEYOR CHUTE UNDER ANY CIRCUMSTANCES WHILST THE CONVEYOR IS RUNNING.

ROUTINE INSPECTION/TENSION:

Step 1. Inspect the condition of the cleaner. Open the inspection door (if fitted) and observe the condition and action of the blades and cleaner.

Step 2. If necessary (and if plant rules allow it), hose any material build-up from the blades or mainframe - DO NOT REACH INTO THE CHUTE WHILST CONVEYOR IS RUNNING.

Step 3. If necessary, re-tension the cleaner - refer to Section 5.

IF BLADE SERVICING IS REQUIRED.

Step 1. Shut down and lock out the conveyor.

Step 2. Release the tension and back the blades away from the belt. Sharply rap the blades against the belt to dislodge any build-up.

Visually inspect the blades.

- If blades are clean, and not excessively worn, re-tension the cleaner.
- If material build-up is still present or blades are excessively worn, proceed.

Step 3. Remove the operator side blade lock and slide the blade assemblies from the track. (Note: blades may require a slight rap with a hammer to loosen before sliding.)

Step 4. Clean and inspect the blades - if blades are worn past the wear line on the back of the blade, replace with new (or refurbished) blades.

Step 5. Re-install blades into mainframe track, followed by blade lock. Re-tension the cleaner as previously described.

Step 6. Remove locks or tags and restart belt. Observe cleaner action and blade effectiveness. Replace CYA door cover - if fitted. Clean up work area.

SECTION 9 – TROUBLE SHOOTING

PROBLEM - Blades fold through on start-up.

CAUSE	SOLUTION
Incorrect angle of attack /. installation dimensions	Relocate mounts so that the shaft is 100mm radial from the belt face on the head pulley
Excessive tension	Relax blade tension to maximum tension recommended in installation instructions
Belt running dry	Always place material on the belt for start-up or a little water if material is unavailable
Poor belt condition	Repair belt, dress spices to smooth contour

PROBLEM - Mainframe bent.

CAUSE	SOLUTION
Mainframe undersized	Stiffened mainframe required. Contact ***ESS*** for assistance
Excessive tension	Relax blade tension to maximum tension recommended in installation instructions
Blades folded through	See above
Material build-up between blades/ mainframe and belt	Increase frequency of inspection and service once a week
Normal deflection	A small amount of deflection is considered normal. Contact ***ESS*** if excessive deflection occurs

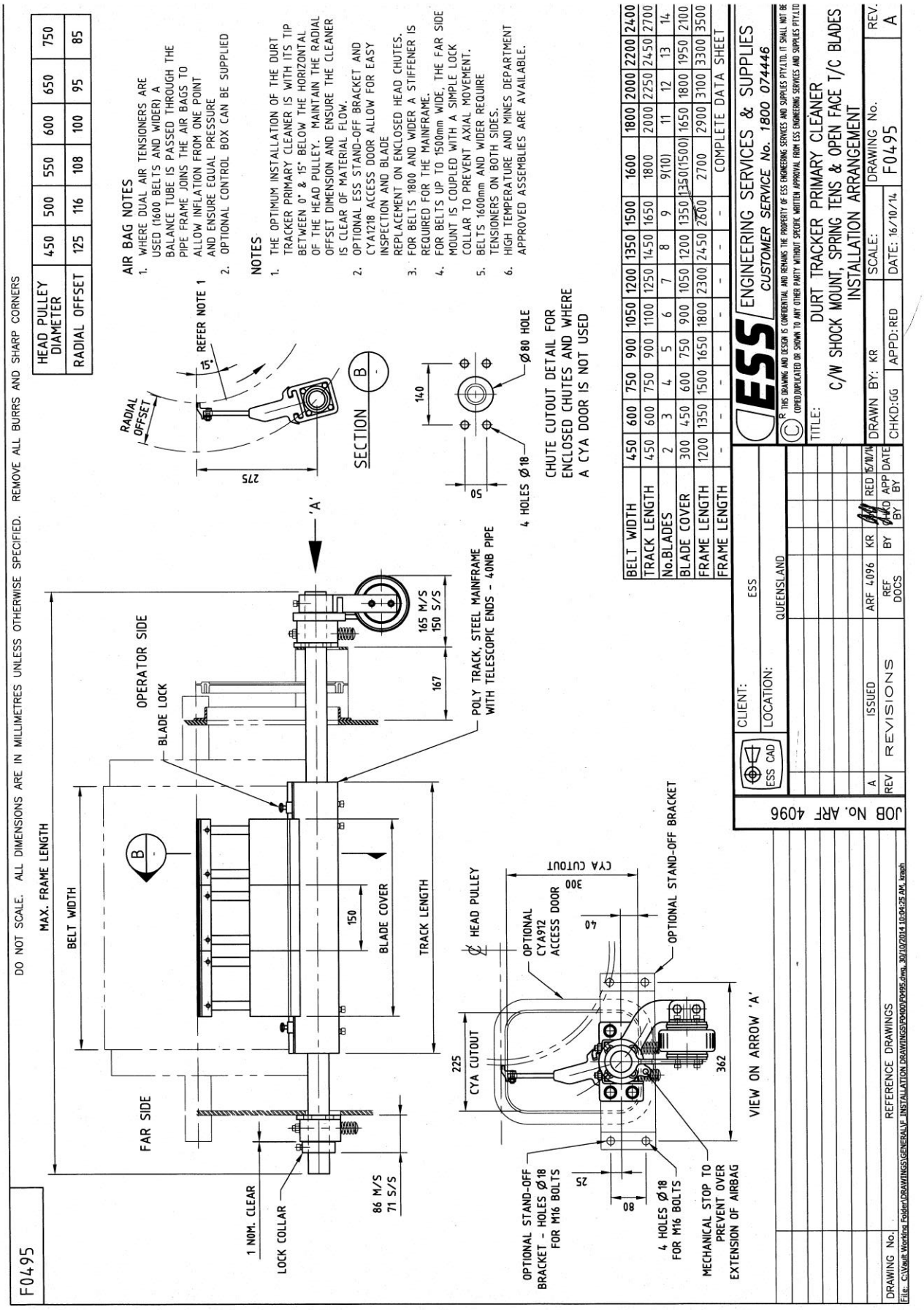
PROBLEM - Higher blade wear rate than estimated.

CAUSE	SOLUTION
Cleaner over-tensioned	Tension cleaner enough to clean the belt only
Incorrect blade material	Contact ***ESS*** for re-appraisal

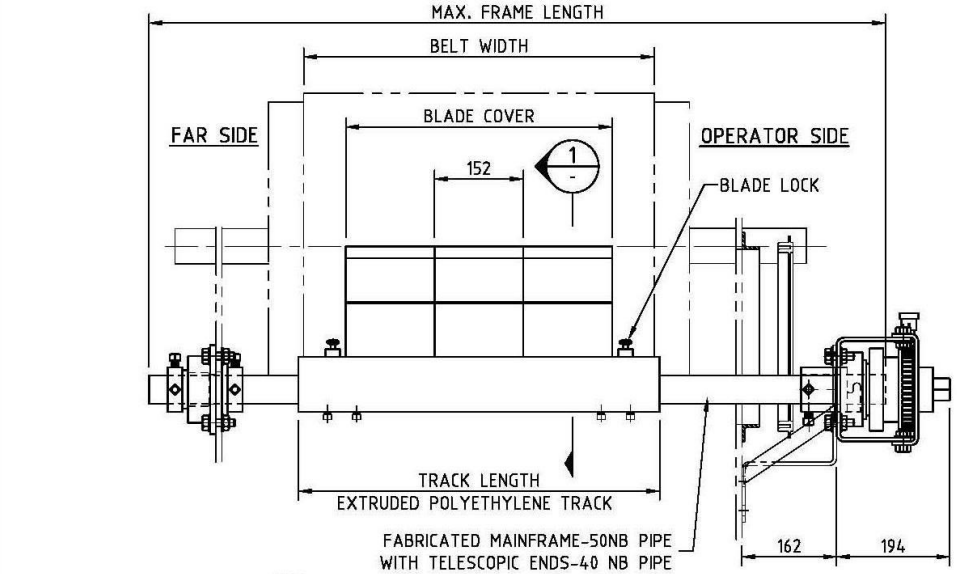
PROBLEM - Insufficient cleaning - too much carryback.

CAUSE	SOLUTION
Cleaner under-tensioned	Re-tension cleaner
Build-up on blade	Rap blades against belt. Increase service frequency
Cleaner overloaded	Add additional secondary cleaner
Secondary cleaner not functioning correctly	Service the secondary cleaner

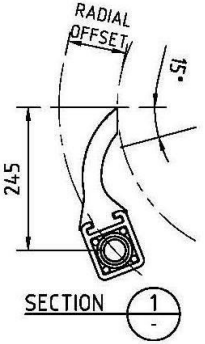
SECTION 10 – INSTALLATION ARRANGEMENT DRAWING



DO NOT SCALE. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED. REMOVE ALL BURRS AND SHARP CORNERS

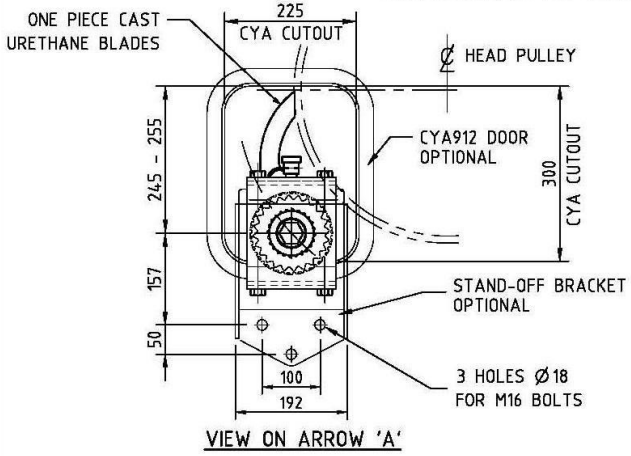


HEAD PULLEY DIAMETER	100	205	230	305-405	>450
RADIAL OFFSET	190	165	140	115	100

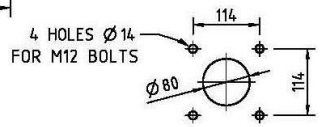


NOTES

1. THE OPTIMUM INSTALLATION OF THE DURT TRACKER PRIMARY CLEANER IS WITH ITS TIP BETWEEN 0° & 15° BELOW THE HORIZONTAL ℄ OF THE HEAD PULLEY. MAINTAIN THE RADIAL OFFSET DIMENSION AND ENSURE THE CLEANER IS CLEAR OF MATERIAL FLOW.
2. OPTIONAL ESS STAND-OFF BRACKET AND CYA912 ACCESS DOOR ALLOW FOR EASY INSPECTION AND BLADE REPLACEMENT ON ENCLOSED HEADCHUTES.
3. FOR BELTS UP TO 1500 WIDE THE FAR SIDE MOUNT IS COUPLED WITH A SIMPLE LOCK COLLAR TO PREVENT AXIAL MOVEMENT. BELTS 1600 AND WIDER REQUIRE TENSIONERS ON BOTH SIDES.
4. FOR BELTS 1800 AND WIDER A STIFFENER IS REQUIRED FOR THE MAINFRAME.
5. HIGH TEMPERATURE AND MINES DEPARTMENT APPROVED ASSEMBLIES ARE AVAILABLE.
6. TRACKS ARE ALSO AVALIABLE IN EXTRUDED ALUMINIUM AND FABRICATED MILD OR STAINLESS STEEL



VIEW ON ARROW 'A'



CHUTE CUTOUT DETAIL FOR ENCLOSED CHUTES AND WHERE A CYA DOOR IS NOT USED

BELT WIDTH	450	600	750	900	1050	1200	1350	1500	1600	1800	2000	2200	2400
TRACK LENGTH	450	600	750	900	1100	1250	1450	1650	1800	2000	2250	2450	2700
No.BLADES	2	3	4	5	6	7	8	9	9(10)	11	12	13	14
DB BLADE COVER	304	456	608	760	912	1064	1216	1368	1368(1520)	1672	1824	1976	2128
FRAME LENGTH	1200	1350	1500	1650	1800	2300	2450	2600	2700	2900	3100	3300	3500
STIFFENER LENGTH	-	-	-	-	-	-	-	-	-	I/S HEADCHUTE OR STRINGER DIMENSION REQUIRED			

F0160	EXPLODED TWIST TENSIONER
F0035	EXPLODED PARTS DRAWING
DRAWING No.	REFERENCE DRAWINGS

File: D:\Vault Working Folder\DRAWINGS\GENERAL\E_INSTALLATION DRAWINGS\F0391.dwg, 10/2/2009 3:48:39 PM, cwilson

JOB No. ARF2717

ESS CAD

CLIENT: ESS

LOCATION: CURRUMBIN

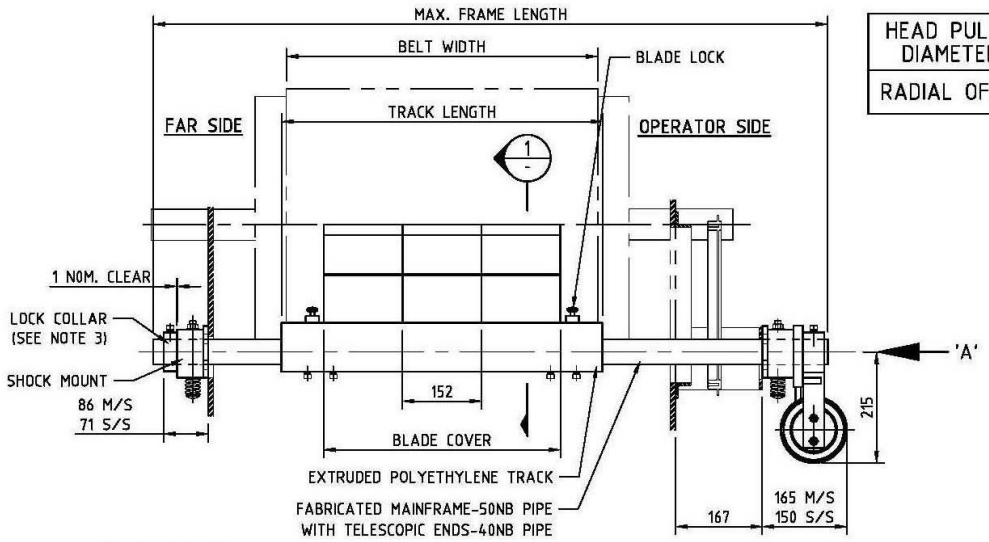
REV	REVISIONS	REF DOCS	BY	CHKD BY	APP BY	DATE
A	ISSUED		CW	AM	SD	02/10/09

ESS ENGINEERING SERVICES & SUPPLIES
CUSTOMER SERVICE No. 1800 074446

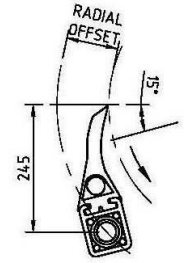
TITLE: DURT TRACKER PRIMARY CLEANER WITH TWIST TENSIONER & CARP 2 BLADES INSTALLATION ARRANGEMENT

DRAWN BY: C.W.	SCALE: NTS	DRAWING No.	REV.
CHKD: AM APPD: SD	DATE: 02/10/09	F0391	A

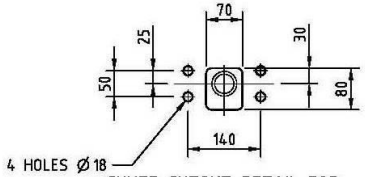
DO NOT SCALE. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED. REMOVE ALL BURRS AND SHARP CORNERS



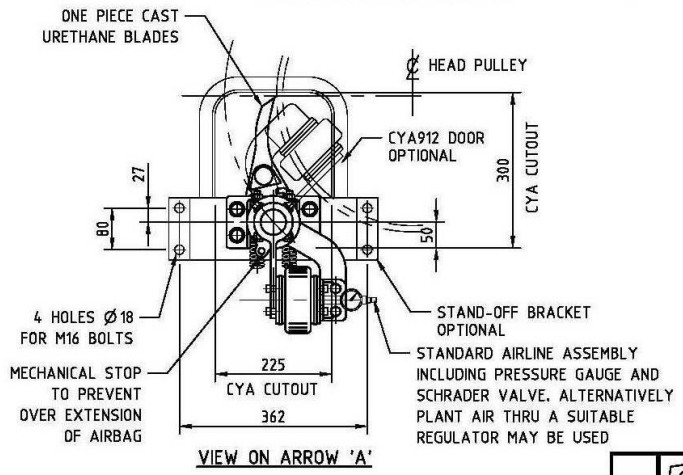
HEAD PULLEY DIAMETER	100	205	230	305-405	>450
RADIAL OFFSET	190	165	140	115	100



SECTION 1



CHUTE CUTOUT DETAIL FOR ENCLOSED CHUTES AND WHERE A CYA DOOR IS NOT USED



VIEW ON ARROW 'A'

AIRBAG NOTES

1. WHERE DUAL AIR TENSIONERS ARE USED (1600 BELTS AND WIDER) A BALANCE TUBE PASSED THROUGH THE PIPE FRAME JOINS THE AIRBAGS TO ALLOW INFLATION FROM ONE POINT AND ENSURE EQUAL PRESSURE.
2. OPTIONAL CONTROL BOX CAN BE SUPPLIED.

NOTES

1. THE OPTIMUM INSTALLATION OF THE DURT TRACKER PRIMARY CLEANER IS WITH ITS TIP BETWEEN 0° & 15° BELOW THE HORIZONTAL ℄ OF THE HEAD PULLEY. MAINTAIN THE RADIAL OFFSET DIMENSION AND ENSURE THE CLEANER IS CLEAR OF MATERIAL FLOW.
2. OPTIONAL ESS STAND-OFF BRACKET AND CYA1218 ACCESS DOOR ALLOW FOR EASY INSPECTION AND BLADE REPLACEMENT ON ENCLOSED HEAD CHUTES.
3. FOR BELTS 1800 AND WIDER A STIFFENER IS REQUIRED FOR THE MAINFRAME.
4. FOR BELTS UP TO 1500mm WIDE, THE FAR SIDE MOUNT IS COUPLED WITH A SIMPLE LOCK COLLAR TO PREVENT AXIAL MOVEMENT.
5. BELTS 1600mm AND WIDER REQUIRE TENSIONERS ON BOTH SIDES.
6. HIGH TEMPERATURE AND MINES DEPARTMENT APPROVED ASSEMBLIES ARE AVAILABLE.

BELT WIDTH	450	600	750	900	1050	1200	1350	1500	1600	1800	2000	2200	2400
TRACK LENGTH	450	600	750	900	1100	1250	1450	1650	1800	2000	2250	2450	2700
No.BLADES	2	3	4	5	6	7	8	9	9(10)	11	12	13	14
BLADE COVER	304	456	608	760	912	1064	1216	1368	1368(1520)	1672	1824	1976	2128
FRAME LENGTH	1200	1350	1500	1650	1800	2300	2450	2600	2700	2900	3100	3300	3500
STIFFENER LENGTH	-	-	-	-	-	-	-	-	-	I/S HEADCHUTE OR STRINGER DIMENSION REQUIRED			

REV	REVISIONS	REF DOCS	BY	CHKD BY	APP BY	DATE
C	RADIAL OFFSET TABLE ADDED		G.G.	S.D.	T.T.	21/9/05
B	BELT LIST UPDATED		T.H.			9/97
A	REDRAWN		T.H.			6/96

JOB No.

DRAWING No. | REFERENCE DRAWINGS

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ESS CAD

CLIENT:

LOCATION:

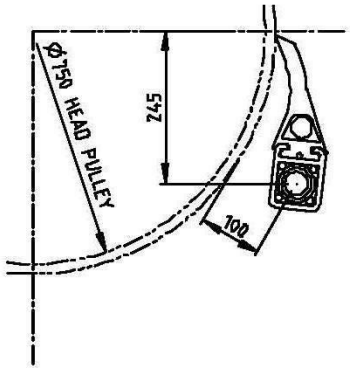
ESS ENGINEERING SERVICES & SUPPLIES
CUSTOMER SERVICE No. 1800 074446

TITLE: DURT TRACKER PRIMARY CLEANER WITH SPRING SHOCK MOUNT AND AIR TENSIONER INSTALLATION ARRANGEMENT

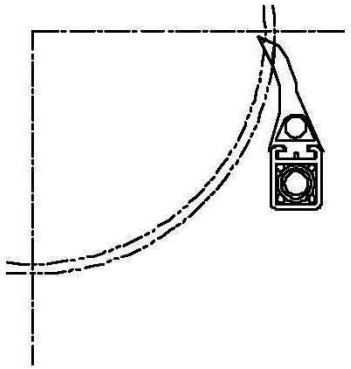
DRAWN BY: H.POLOAI	SCALE: NTS	DRAWING No.	REV.
CHKD: APPD:	DATE: 14/4/93	F0074	C

F0213

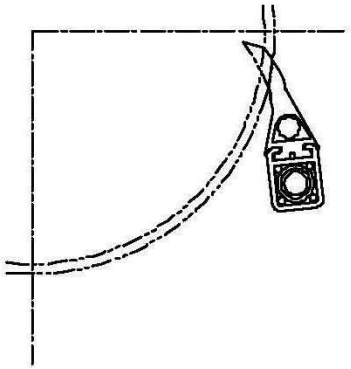
DO NOT SCALE. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED. REMOVE ALL BURRS AND SHARP CORNERS



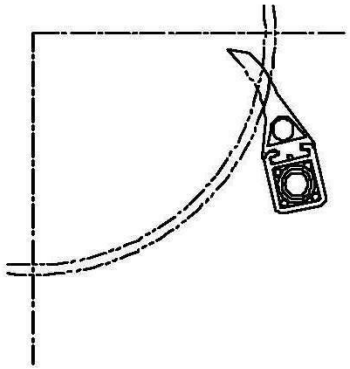
BLADE SHOWN IN ORIGINAL MOUNTING POSITION PRIOR TO ANY WEAR



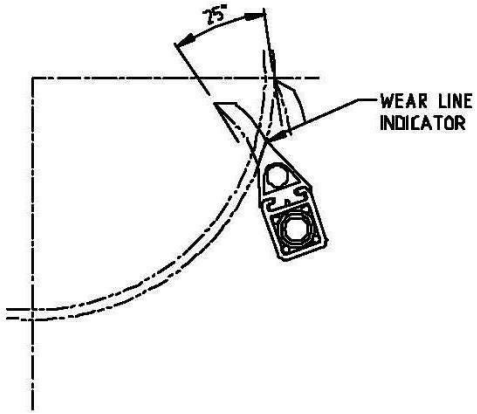
BLADE WORN 25%



BLADE WORN 50%



BLADE WORN 75%



BLADE WORN 100%

NOTES:

DURT TRACKER BLADE IS SHOWN FITTED TO Ø750 HEAD PULLEY AS THIS IS A TYPICAL SIZE FOR DURT TRACKER APPLICATIONS.

PERCENTAGE WEAR RATES ARE BASED ON ANGULAR INCREMENTS AND MAY VARY DEPENDING ON HEAD PULLEY SIZES, SET-OUT DIMENSIONS OR WEAR CONDITIONS.

JOB No.

ESS CAD

CLIENT:

LOCATION:

REV	REVISIONS	BY	CHKD BY	APP BY	DATE

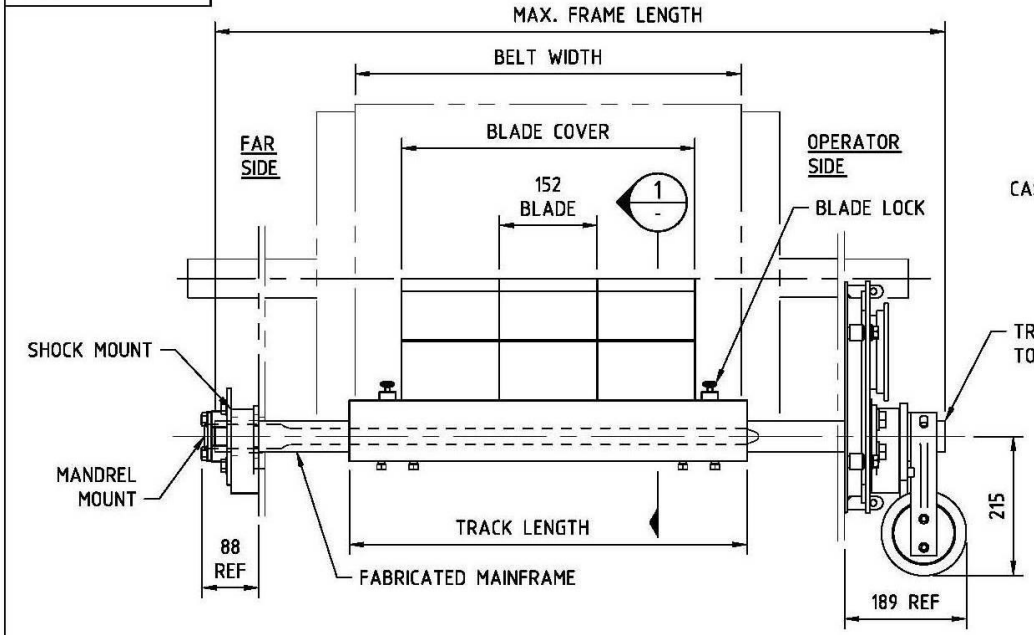
ESS ENGINEERING SERVICES & SUPPLIES
QLD Ph. 07-5568 1077 NSW Ph. 02 4272 4422 WA Ph. 08 9370 3156

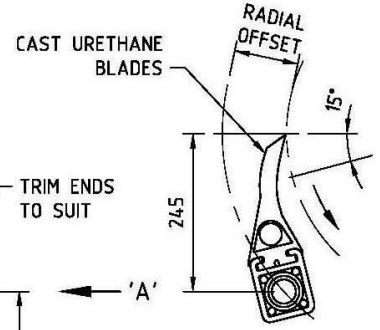
TITLE: DURT TRACKER PRIMARY CLEANER BLADE PROFILE WEAR RATES

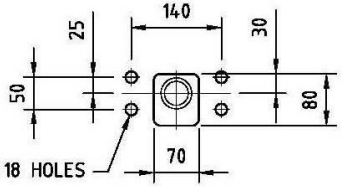
DRAWN BY: R.DAKLEY		SCALE: 1:7.5 [A3]	DRAWING No	REV.
CHKD: S.D.	APPD: T.T.	DATE: 20/6/00	F0213	

F0331

DO NOT SCALE. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED. REMOVE ALL BURRS AND SHARP CORNERS

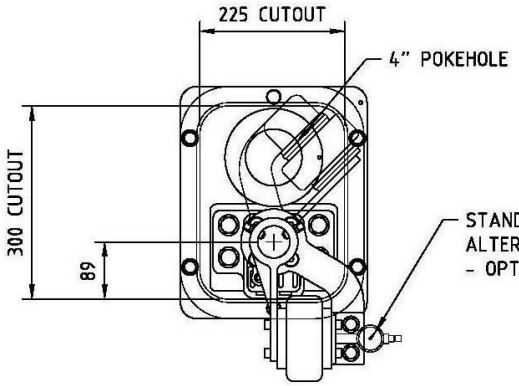






CHUTE CUTOUT DETAIL FOR FAR SIDE

HEAD PULLEY DIAMETER	100	205	230	305-405	>450
RADIAL OFFSET	190	165	140	115	100



VIEW ON ARROW 'A'

CYA1218 DOOR (300X450 CUTOUT) IS REQUIRED FOR DURT TRACKER PRIMARY CLEANERS WITH A STIFFENER (REFER TO DRG F0447)

NOTES

1. THE OPTIMUM INSTALLATION OF THE TRAC-MOUNT PRIMARY CLEANER IS WITH ITS TIP BETWEEN 0° & 15° BELOW THE HORIZONTAL ℄ OF THE HEAD PULLEY. MAINTAIN THE RADIAL OFFSET DIMENSION AND ENSURE THE CLEANER IS CLEAR OF MATERIAL FLOW.
2. HIGH TEMPERATURE AND MINES DEPARTMENT APPROVED ASSEMBLIES ARE AVAILABLE.

BELT WIDTH	450	600	750	900	1050	1200	1350	1500
TRACK LENGTH	450	600	750	900	1100	1250	1450	1650
No.BLADES	2	3	4	5	6	7	8	9
DB BLADE COVER	304	456	608	760	912	1064	1216	1368
FRAME LENGTH	1200	1350	1500	1650	1800	2300	2450	2600

DRAWING No.	REFERENCE DRAWINGS
F0368	DURT TRACKER PRIMARY C/W SPRING TENSIONING, CYA DOOR & MANDREL
F0447	CYA1218 DOOR FOR MANDREL ARRANGEMENT

File: C:\Vault Working Folders\DRAWINGS\GENERALIZE_INSTALLATION_DRAWINGS\F0000\F0331.dwg, 2/05/2011 10:36:21 AM, acadvb

JOB No.

ESS CAD

CLIENT:

LOCATION:

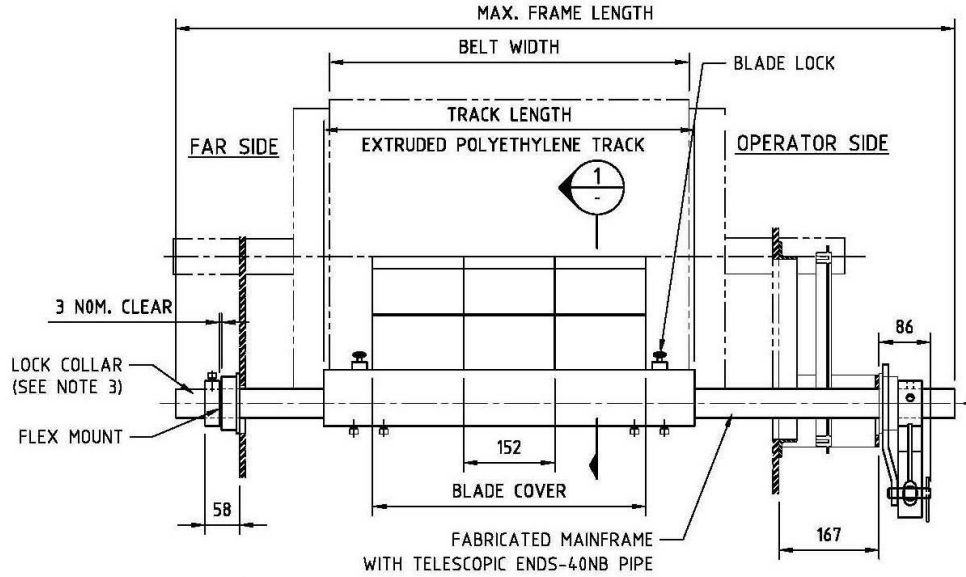
REV	REVISIONS	REF DOCS	BY	CHKD BY	APP BY	DATE
B	CYA1218 DOOR NOTE ADDED		SD	AM	CW	2/6/11
A	ISSUED		SD	GC	TT	16/9/05

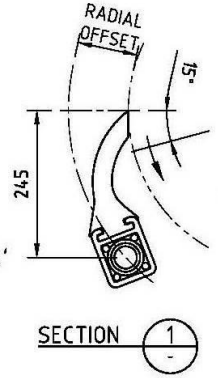
ESS ENGINEERING SERVICES & SUPPLIES
CUSTOMER SERVICE No. 1800 074446

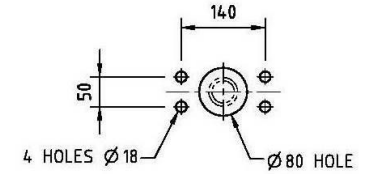
TITLE: DURT TRACKER PRIMARY CLEANER WITH AIR TENSIONER, CYA DOOR & MANDREL INSTALLATION ARRANGEMENT

DRAWN BY: SD	SCALE: NTS	DRAWING No.	REV.
CHKD:GC APPD:TT	DATE: 16/9/05	F0331	B

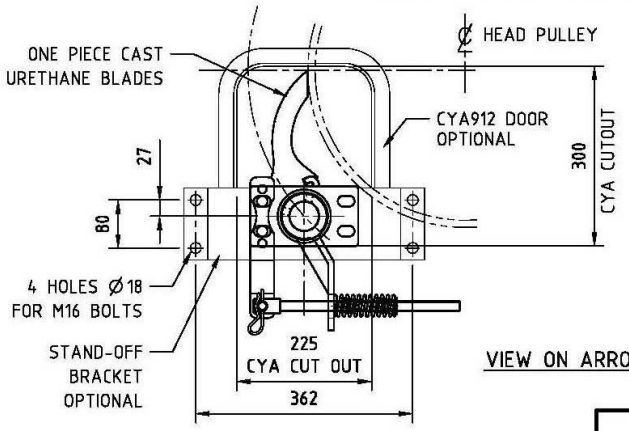
DO NOT SCALE. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED. REMOVE ALL BURRS AND SHARP CORNERS







CHUTE CUTOUT DETAIL FOR ENCLOSED CHUTES AND WHERE A CYA DOOR IS NOT USED



VIEW ON ARROW 'A'

HEAD PULLEY DIAMETER	100	205	230	305-405	>450
RADIAL OFFSET	190	165	140	115	100

NOTES

1. THE OPTIMUM INSTALLATION OF THE DURT TRACKER PRIMARY CLEANER IS WITH ITS TIP BETWEEN 0° & 15° BELOW THE HORIZONTAL ℄ OF THE HEAD PULLEY. MAINTAIN THE RADIAL OFFSET DIMENSION AND ENSURE THE CLEANER IS CLEAR OF MATERIAL FLOW.
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No.BLADES	2	3	4	5	6	7	8	9	9(10)	11	12	13	14
DB BLADE COVER	304	456	608	760	912	1064	1216	1368	1368(1520)	1672	1824	1976	2128
FRAME LENGTH	1200	1350	1500	1650	1800	2300	2450	2600	2700	2900	3100	3300	3500
STIFFENER LENGTH	-	-	-	-	-	-	-	-	-	I/S HEADCHUTE OR STRINGER DIMENSION REQUIRED			

DRAWING No.	REFERENCE DRAWINGS
F0294	SPRING TENSIONER FOR FLEX MOUNT
F0297	SPRING TENSIONER FOR SHOCK & TA MOUNT
F0307	DTDB C/W STANDARD BLADES

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JOB No.

ESS CAD

CLIENT:

LOCATION:

REV	REVISIONS	REF DOCS	BY	CHKD BY	APP BY	DATE
A	ISSUED		G.G.	S.D.	T.T.	24/11/05

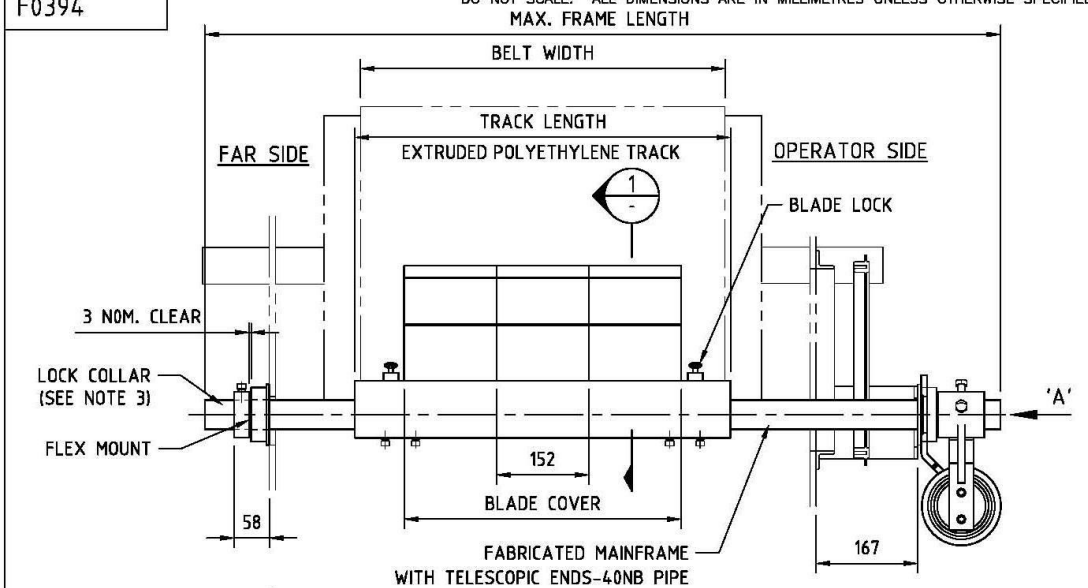
ESS ENGINEERING SERVICES & SUPPLIES
CUSTOMER SERVICE No. 1800 074446

TITLE: DURT TRACKER PRIMARY CLEANER
C/W FLEX MOUNT, SPRING TENSIONER & CARP 2 BLADES
INSTALLATION ARRANGEMENT

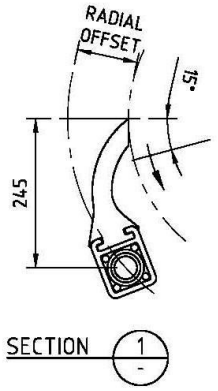
DRAWN BY: G.GOODEY	SCALE: NTS	DRAWING No.	REV.
CHKD:S.D. APPD:T.T.	DATE: 25/11/05	F0341	A

F0394

DO NOT SCALE. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED. REMOVE ALL BURRS AND SHARP CORNERS

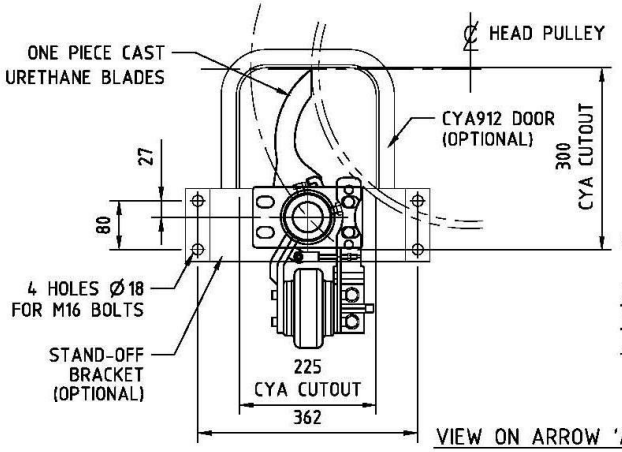


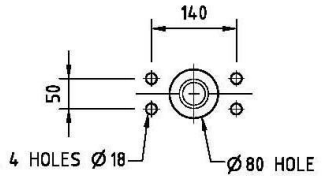
HEAD PULLEY DIAMETER	100	205	230	305-405	>450
RADIAL OFFSET	190	165	140	115	100



NOTES
1. THE OPTIMUM INSTALLATION OF THE DURT TRACKER PRIMARY CLEANER IS WITH ITS TIP BETWEEN 0° & 15° BELOW THE HORIZONTAL ℄ OF THE HEAD PULLEY. MAINTAIN THE RADIAL OFFSET DIMENSION AND ENSURE THE CLEANER IS CLEAR OF MATERIAL FLOW.
2. OPTIONAL ESS STAND-OFF BRACKET AND CYA912 ACCESS DOOR ALLOW FOR EASY INSPECTION AND BLADE REPLACEMENT ON ENCLOSED HEADCHUTES.
3. FOR BELTS UP TO 1500 WIDE THE FAR SIDE FLEX MOUNT IS COUPLED WITH A SIMPLE LOCK COLLAR TO PREVENT AXIAL MOVEMENT. BELTS 1500 AND WIDER REQUIRE TENSIONERS ON BOTH SIDES.
4. FOR BELTS 1800 AND WIDER A STIFFENER IS REQUIRED FOR THE MAINFRAME.
5. HIGH TEMPERATURE AND MINES DEPARTMENT APPROVED ASSEMBLIES ARE AVAILABLE.
6. TRACKS ARE ALSO AVAILABLE IN EXTRUDED ALUMINIUM AND FABRICATED MILD OR STAINLESS STEEL

AIRBAG NOTES
1. WHERE DUAL AIR TENSIONERS ARE USED (1500 BELTS AND WIDER) A BALANCE TUBE PASSED THROUGH THE PIPE FRAME JOINS THE AIRBAGS TO ALLOW INFLATION FROM ONE POINT AND ENSURE EQUAL PRESSURE.
2. OPTIONAL CONTROL BOX CAN BE SUPPLIED.





CHUTE CUTOUT DETAIL FOR ENCLOSED CHUTES AND WHERE A CYA DOOR IS NOT USED

BELT WIDTH	450	600	750	900	1050	1200	1350	1500	1600	1800	2000	2200	2400
TRACK LENGTH	450	600	750	900	1100	1250	1450	1650	1800	2000	2250	2450	2700
No.BLADES	2	3	4	5	6	7	8	9	9(10)	11	12	13	14
DB BLADE COVER	304	456	608	760	912	1064	1216	1368	1368(1520)	1672	1824	1976	2128
FRAME LENGTH	1200	1350	1500	1650	1800	2300	2450	2600	2700	2900	3100	3300	3500
STIFFENER LENGTH	-	-	-	-	-	-	-	-	-	I/S HEADCHUTE OR STRINGER DIMENSION REQUIRED			

DRAWING No.	REFERENCE DRAWINGS

File: C:\Vault Working Folder\DRAWINGS\GENERALIZ_INSTALLATION DRAWINGS\F0300\F0394.dwg, 17/04/2012 8:14:34 AM, adavis

JOB No.

ESS CAD

CLIENT:

LOCATION:

REV	REVISIONS	REF DOCS	BY	CHKD BY	APP BY	DATE
B	UPDATED		SD	AM	TT	16/4/12
A	ISSUED		SD	GG	CW	12/11/09

ESS ENGINEERING SERVICES & SUPPLIES
CUSTOMER SERVICE No. 1800 074446

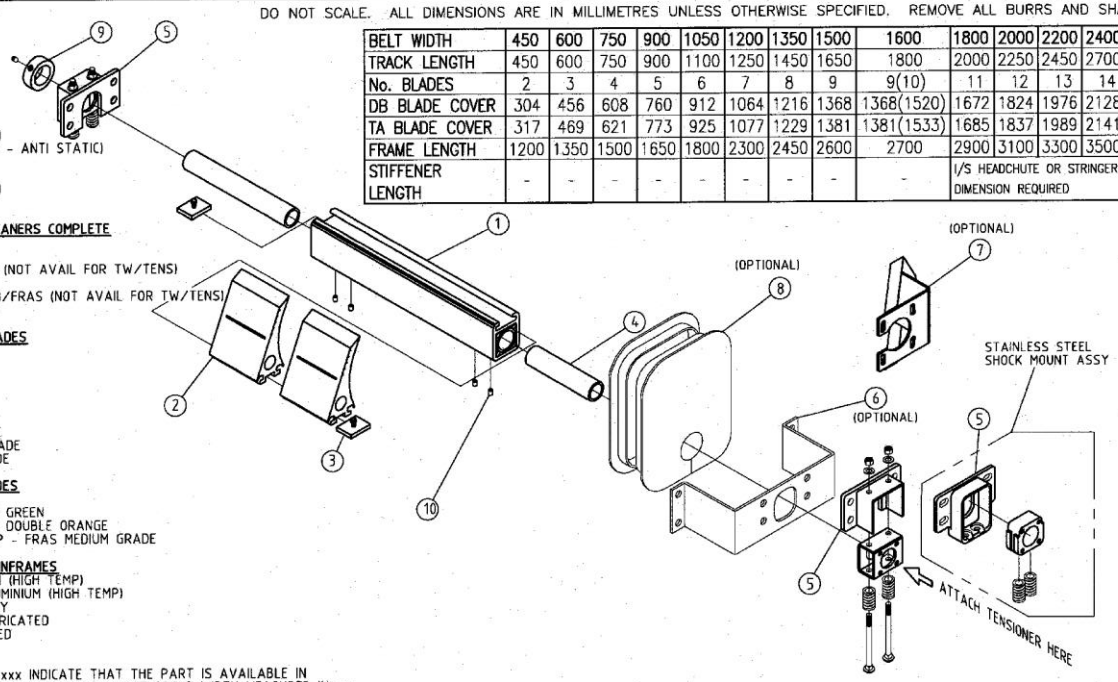
TITLE: DURT TRACKER PRIMARY CLEANER
C/W FLEX MOUNT, AIR TENSIONER & CARP 2 BLADES
INSTALLATION ARRANGEMENT

DRAWN BY: SD	SCALE: NTS	DRAWING No.	REV.
CHKD:GG APPD:CW	DATE: 12/11/09	F0394	B

F0035

DO NOT SCALE. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED. REMOVE ALL BURRS AND SHARP CORNERS

BELT WIDTH	450	600	750	900	1050	1200	1350	1500	1600	1800	2000	2200	2400
TRACK LENGTH	450	600	750	900	1100	1250	1450	1650	1800	2000	2250	2450	2700
No. BLADES	2	3	4	5	6	7	8	9	9(10)	11	12	13	14
DB BLADE COVER	304	456	608	760	912	1064	1216	1368	1368(1520)	1672	1824	1976	2128
TA BLADE COVER	317	469	621	773	925	1077	1229	1381	1381(1533)	1685	1837	1989	2141
FRAME LENGTH	1200	1350	1500	1650	1800	2300	2450	2600	2700	2900	3100	3300	3500
STIFFENER LENGTH	-	-	-	-	-	-	-	-	-	I/S HEADCHUTE OR STRINGER DIMENSION REQUIRED			



SUFFIX NOTES

GENERAL
s = S.S. (STAINLESS STEEL)
f = FRAS (FIRE RETARDANT - ANTI STATIC)

FASTENERS / FITTINGS
s = S.S. (STAINLESS STEEL)
z = ZINC PLATED

DURT TRACKER PRIMARY CLEANERS COMPLETE
= MILD STEEL/POLY
W = MILD STEEL FAB
fw = MILD STEEL FAB/FRAS (NOT AVAIL FOR TW/TENS)
s = STAINLESS STEEL
sfw = STAINLESS STEEL FAB/FRAS (NOT AVAIL FOR TW/TENS)
sw = STAINLESS STEEL FAB

DURT TRACKER PRIMARY BLADES
= ORANGE
b = BLUE
g = GREEN
fc = FRAS CLIP GRADE
fh = FRAS HARD GRADE
fm = FRAS MEDIUM GRADE
mc = MAXIMISER CLIP GRADE
mm = MAXIMISER MEDIUM GRADE
mh = MAXIMISER HARD GRADE

TUNGSTEN CARBIDE TIP BLADES
= ORANGE
g = TUNGSTEN CARBIDE TIP GREEN
d = TUNGSTEN CARBIDE TIP DOUBLE ORANGE
fm = TUNGSTEN CARBIDE TIP - FRAS MEDIUM GRADE

DURT TRACKER PRIMARY MAINFRAMES
a = MILD STEEL/ALUMINIUM (HIGH TEMP)
sa = STAINLESS STEEL/ALUMINIUM (HIGH TEMP)
s = STAINLESS STEEL/POLY
sw = STAINLESS STEEL FABRICATED
w = MILD STEEL/FABRICATED

PART NO. NOTES
1. PART No's FOLLOWED BY xxx INDICATE THAT THE PART IS AVAILABLE IN ALL STANDARD BELT WIDTHS. SUBSTITUTE xxx WITH BELT WIDTH MEASURED IN cm.

ITEM		DESCRIPTION
10	02315529S	SCREW M12X28 HEX SET POINTED 304SS
9	09010041(s)	LOCK COLLAR 40NB C/W SET SCREWS
8	23010912(s)	CYA ACCESS DOOR ASSY 225 x 300
7	09010031(s)	TWIST TENS & TA STAND-OFF BRACKET
6	09010030(s)	PRIMARY STAND-OFF BRACKET
5	09010001(s)	SHOCK MOUNT ASSEMBLY C/W FASTENERS
	19121015	TELESCOPING ENDS 900
4	19121010	TELESCOPING ENDS 600
3	40500055s	INLINE 20TEN BLADE LOCK C/W FASTENERS
	17016095(xx)	TUNGSTEN CARBIDE BLADE
	17015095(xx)	CARP-2 BLADE
	17013295(xx)	WING BLADE
2	17013095(xx)	STANDARD BLADE
	15120xxx(a)(sa)	MAINFRAME & TRACK ASSY (H/TEMP) x BELT WIDTH(cm)
1	15160xxx(s)(w)(sw)	MAINFRAME & TRACK ASSY x BELT WIDTH(cm)

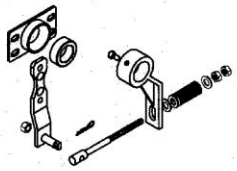
NOTES:
1. CLEANERS FOR BELTS 1600mm AND GREATER REQUIRE TENSIONER ASSEMBLIES ON BOTH SIDES.
2. THE FLEX MOUNT CAN ONLY BE USED IN CONJUNCTION WITH COUNTERWEIGHT TENSIONERS. (FLEX MOUNT REPLACES ITEM 5)
3. FOR ENCLOSED CHUTE CONVEYORS ESS RECOMMENDS THE USE OF CYA DOORS AND STAND-OFF BRACKETS (ITEMS 7 & 8 FOR TWIST TENSIONERS OR 6 & 8 FOR OTHER TENSIONERS) FOR EASE OF BLADE INSPECTION AND REPLACEMENT.
4. MAINFRAMES COME STANDARD WITH POLY TRACK AND ARE ALSO AVAILABLE WITH ALUMINIUM TRACK OR FULLY FABRICATED FROM MILD OR STAINLESS STEEL
5. MANDREL MOUNTS ARE ALSO AVAILABLE CONTACT ESS FOR MORE INFORMATION

PART No's FOR BELT CLEANER ASSEMBLIES

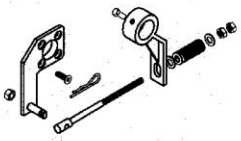
16 xxx xxx xx — SUFFIX LETTERS SEE SUFFIX NOTE

TENSIONER
000–NONE
003–TWIST TENSIONER
101–PIN TENSIONER
102–AIR TENSIONER
304–C'WEIGHT TENSIONER

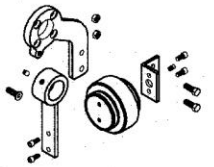
BELT WIDTH(cm)
e.g. 450–045
2400–240
(AS ABOVE)



SPRING TENSIONER ASSEMBLY FOR FLEX MOUNT – DRG F0294



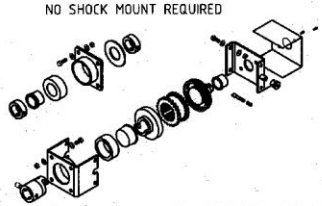
SPRING TENSIONER ASSEMBLY FOR SHOCK MOUNT – DRG F0297



5 METRES OF AIRLINE (P.No. 02570106p) IS SUPPLIED WITH EACH CLEANER

AIR TENSIONER ASSEMBLY – DRG F0273

NO SHOCK MOUNT REQUIRED



TWIST TENSIONER ASSEMBLY – DRG F0160

F0307	INSTALLATION – STANDARD C/W FLEX MOUNT & SPRING TENSIONER
F0142	INSTALLATION – STANDARD C/W MANDREL & TWIST TENSIONER
F0140	INSTALLATION – STANDARD C/W TWIST TENSIONER
F0074	INSTALLATION – STANDARD C/W AIR TENSIONER
DRAWING No.	REFERENCE DRAWINGS

File: C:\TEMP\engineeringESS509875\F0035.dwg, 23/09/2014 11:11:03 AM,

REV	REVISIONS	REF DOCS	BY	CHKD BY	APP BY	DATE
I	UPDATED ITEM 10	EDCR763	KO	[illegible]	RED	23.9.14
H	IT.3 REV. SPR TENS ADDED	CA02099	SD	GC	TT	2/3/12
G	AIRLINE ADDED	ARF1379	SD	GC	TT	25/11/11

JOB No.

CLIENT:
LOCATION:
ESS CAD

ESS ENGINEERING SERVICES & SUPPLIES
CUSTOMER SERVICE No. 1800 074446

TITLE: DURT TRACKER PRIMARY CLEANER C/W MILD STEEL & STAINLESS STEEL MOUNTS & TENSIONERS – EXPLODED PARTS LIST

DRAWN BY: H.P.		SCALE: NTS	DRAWING No.	REV.
CHKD:	APPD:	DATE: 9/10/91	F0035	I

SECTION 12

FINAL CHECKLIST

Site:_____ Number: _____ Date:_____

Site Equipment No./Location: _____ Site Contact: _____

Completed By: _____ **(Circle Yes or No Below)**

1. **Was equipment to ESS Specification?** _____ **Yes/No**

   Drawing No. Ref:_____**Attached? Yes/No**

   If No, WHY _____

   _____

   Will this affect performance? Yes/No

   If Yes, WHY _____

   _____

2. **Was this a standard ☐ service ☐ inspection ☐ installation? Yes/No**

   If No, WHY _____

   _____

3. **Was work carried out as per procedure and JSA? Yes/No**

   If No, WHY _____

   _____

4. **Is equipment fit for commissioning? Yes/No**

   If No, WHY _____

   _____

5. **Was a final inspection carried out while plant was running? Yes/No**

   If No, WHY _____

   _____

6. **Has anything changed from previous service / inspection / installation? Yes/No**

   If Yes, WHAT _____

   _____

7. **Is equipment performance to Client expectations? Yes/No**

   If No, WHY _____

   _____

ESS Signature: _____ **Client Signature:** _____