TANCO AUTOWRAP
COBRA 120 MODEL 1999
OPERATORS MANUAL
AND
PARTS LIST
WD80-1200A-M0599

INDEX	COBRA 120	PAGE NO

GUARANTEE

Subject as hereunder provided, the Sellers undertake to correct either by repair or at their election by replacement any defect of material or workmanship which occurs in any of its goods within twelve months after delivery of such goods to first user, with the exception of contractors or commercial users when warranty period is six months.
In respect of Autowraps the warranty period is for 12 months or 8000 bales which ever occurs first.
In respect of Aerways tine breakage will be assessed on an individual basis in every case.

The term goods when used in this document means the article or articles described in invoice as sold by the sellers but does not include equipment or proprietary parts or accessories not manufactured by the sellers. The sellers, however, undertake to pass on so far as they legally can to the first user the benefit of any warranty given to the Sellers by the suppliers of such equipment, parts or accessories.

This understanding shall not apply to:
(a) Any goods which have been sold by the first user.
(b) Any goods which have been injured by unfair wear and tear, neglect or improper use.
(c) Any goods the identification marks of which have been altered or removed.
(d) Any goods which have not received the basic normal maintenance such as tightening of bolts, nuts, tines, hose connections and fittings and normal lubrication with the recommended lubricant.
(e) The use of any product on tractors exceeding the recommended horsepower.
(f) Any goods which have been altered or repaired other than on instruction or with the written approval of the Seller or to which any part not manufactured or having written approval by the Sellers have been fixed.
(g) Any second-hand goods or part thereof.

Any allegedly defective part or parts returned to the Sellers must be sent carriage paid. No claim for repair or replacement will be entertained unless upon discovery of the alleged defect written notification is sent to the Sellers giving, at the same time, the name of the Buyer from whom the goods were purchased and the date of purchase together with full details of the alleged defect and the circumstances involved, also the serial number of the machine etc.,

The Sellers shall be under no liability to their Buyers and first and subsequent users of their goods or to any other person or persons for loss or damages howsoever arising in respect of either personal injuries or for arising out of, or in any way connected with or arising from the manufacturers sale, handling, repair, maintenance, replacement or use of its goods or the failure or malfunction of any of its goods.
Representation and/or warranties made by any person (including Buyers and employees and other representatives of the Seller) which are inconsistent or conflicting with these conditions are not binding upon the Sellers unless given in writing and signed by a Director of the Sellers.

CLAIMS

If you wish to make a claim under guarantee.

1 Immediately, stop using the machine.

2 List the details of the machine, its serial number and the part number of the damaged part.

3 Consult with your Tanco dealer (supplier) and have him forward your claim and the damaged item to Tanco.

GENERAL SAFETY RECOMMENDATIONS

Before operating the machine, always ensure that the tractor and machine meet with work safety and road traffic regulations.

BASIC PRINCIPLES

1: In addition to the recommendations given in this manual, legislation on work safety and accident prevention must also be respected.

2: Advice is indicated on the machine, specifying safety recommendations in order to prevent accidents.

3: Before travelling on public roads, the operator must ensure that the machine conforms to road traffic regulations.

4: Before starting work, the operator must be familiar with all machine controls, handling devices and their functions. once at work, it is too late to do this!

5: Do not wear loose clothing which could become caught up in moving elements.

6: The tractor should be equipped with a safety cab.

7: Before starting up the machine and beginning work, check the surrounding area (beware of children!) . Make sure there is sufficient visibility. Keep all people and animals away from the danger zone of the machine (risk of projection!).

8: Carrying people or animals on the machine when working or in transport is strictly forbidden.

9: Machine must only be attached to tractor using means provided and in accordance with current safety standards.

10: Special care should be taken when attaching or removing the machine from the tractor.

11:: Before transporting the machine on public roads, ensure that all legally required guards and indicators (lights, reflectors ...) are in place and in good operation.

12: All operating controls (cords, cables, rods etc.) must be positioned so that they cannot be set off accidentally, risking accident or damage.

13: Before travelling on public roads, put the machine into its transport position as instructed in this operators manual.

14: Never leave the tractor seat while the machine is operating.

15: Drive speed must be adapted to ground conditions as well as to roads and paths. Always avoid abrupt changes of direction.

16: Before operating the machine, ensure that all safety guards are firmly in place and in good condition. If worn or damaged, replace immediately.

17: Before operating the machine, check the tightness of all nuts and bolts, particularly on fixing elements (blades, tines, knives, spades etc.,).

18: Keep clear of the machine operating area.

19: **WARNING!** Danger of crushing and shearing can exist when components are operated by hydraulic or pneumatic controls.

20: Before leaving the tractor or before adjusting, maintaining or repairing the machine, turn off the engine, remove the ignition key and wait until all moving parts have come to a complete stop,

HYDRAULIC SYSTEM

1: **WARNING!** Hydraulic system is under pressure.

2: When fitting hydraulic motors or cylinders, ensure that connections have been made correctly, as per manufacturers instructions.

3: Before connecting hoses to the tractor hydraulics, ensure that tractor and machine circuits are not under pressure.

4: It is strongly recommended that the operator marks the hydraulic connections between tractor and machine to avoid making a wrong connection.
WARNING! Functions could be reversed (for example: lift/lower).

5: Check hydraulic hoses regularly! Worn or damaged hoses must be replaced immediately. Replacement parts must be in accordance with the manufacturers recommendations concerning specifications and quality.

6: Should a leak be found, take all necessary precautions to avoid accidents.

7: Any liquid under pressure (particularly oil from hydraulics) can penetrate the skin and cause severe injury. If injured, see a doctor immediately, there could be a danger of infection.

8: Before any adjustments, maintenance or repairs are carried out, lower the machine, depressurise the circuit, turn off the engine and remove the ignition key.

MAINTENANCE

1: Before checking for any machine malfunction and before adjusting, maintaining or repairing the machine, turn off engine and remove ignition key.

2: Check tightness of nuts and bolts regularly. Retighten if necessary.

3: If the machine is raised, prop it up in a stable position before carrying out any maintenance work.

4: When replacing a working part, wear protection gloves and use only standardised tools.

5: It is forbidden to discard any oil, grease or filters. These must be given to waste disposal organisations to protect the environment.

6: Disconnect power source before any work is done to the electric system.

7: Check safety guards regularly, particularly those that are subject to wear. Replace immediately if damaged.

8: Spare parts used must be in accordance with specifications and standards as defined by the manufacturer. Use only genuine TANCO parts.

9: Before any electric welding is carried out on tractor or attached machine, disconnect generator and battery terminals.

10: Repairs on elements under pressure or tension (springs, accumulators etc.) must only be carried out by competent persons with standardised equipment.

21: Do not stand between the tractor and the machine unless the hand brake is tight and/or stops have been placed under the wheels.

22: Before any adjustments, maintenance or repairs are carried out, ensure that the machine cannot be started up accidentally.

ADDITIONAL RECOMMENDATIONS FOR LINKAGE MOUNTED MACHINES

1: Before attaching the machine, ensure that the front tractor axle is sufficiently ballasted. Ballast is to be placed on the supports provided in accordance with instructions of the tractor manufacturer.

2: Do not exceed the maximum axle load or the overall transport weight prescribed by the tractor manufacturer.

3: Precision steering, tractor adherence, road holding and efficient braking are influenced by the type of implement, weight, ballast of front axle, ground or road conditions. It is therefore of utmost importance to be cautious in every given situation.

4: Be particularly cautious when turning corners, paying attention to machine overhang, length, height and weight.

SAFETY RECOMMENDATIONS FOR ATTACHING IMPLEMENTS TO TRACTOR

1: When attaching or removing the machine from the tractor, position hydraulic lift control lever in such a way that it cannot be set off accidentally.

2: When attaching the machine to the tractor hydraulic linkage, ensure that diameter of the link pins corresponds to the diameter of the ball joints.

3: **WARNING!** Danger of crushing and shearing can exist in the lifting zone of the tractor hydraulic linkage!

4: Do not stand between the tractor and the machine when operating the outer lever of the lift mechanism.

5: In transport, the machine lift mechanism should be stabilised by tractor tie rods to avoid floatation and side shifting.

6: When transporting the machine, lock the hydraulic lift control lever in place so that it cannot be lowered accidentally.

TECHNICAL SPECIFICATIONS

COBRA 1200

Dimensions

Total Length - Including Bale Ramp	5490mm
Total Length - Excluding Bale Ramp	4260mm
Width - Lift arm fully raised	3050mm
Width - Lift arm lowered	4150mm
Total height	3230mm

Weight 2800kg

Wheels

Size	15.0/55-17
Pressure	3.5 Bar

Max Bale Weight 1200kg

Speed of Wrap Arm ..... 29 rev/min

Film Dispenser Pre Stretching 55%

Min Oil Requirement ..... 35 litres/min

Power Supply 12V

Attachment to Tractor ..... Lower Link Arms

Maximum Bale Length "Rectangular Bales" ..... Up to 2m

Claas Quadrant 1100, 1200
Deutz Fahr 3612 / Freeman 1590 / Greenland 8080
Hesston 4600, 4700, 4750, 4820, 4860, 4880
John Deere 680, 690 / Krone Big Pack 80/80, 120/80
Mengele 530, 550
New Holland D710, D1000, D1010, D1210
Vicon MP800, M.F.5, MF185 MB, RC 8080,
Welger D4000, D6000.

The following bales can be wrapped in pairs D710, 4600, 4820, Quadrant 1100.

Bale Size "Round Bales" ..... 1.2m Diameter
Adapter kit required

Film (Width of Roll) 750mm

- The speed of rotation can be varied to suit various conditions but on no account should it exceed 30 r.p.m. (Speeds in excess of 30 r.p.m will void warranty).

SAFETY DECALS

The following safety decals have been placed on your machine in the aeras indicated. They are for your personal safety and for the safety of the people working with you. With this manual, walk around your machine and note the content and location of these warning signs. Review these decals and the operating instructions in the manual with your machine operators.
Ensure that thesee decals are always legible. If they are not, replace them,

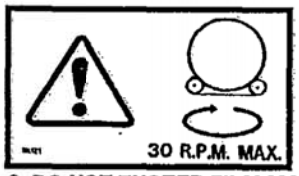
1.

1. WARNING SHARP KNIFE

2.

2. BEFORE STARTING THE MACHINE READ OPERATORS NANUAL AND SAFETY

3.



3. DO NOT EXCEED FILM MAST SPEED OF 25 R.P.M.

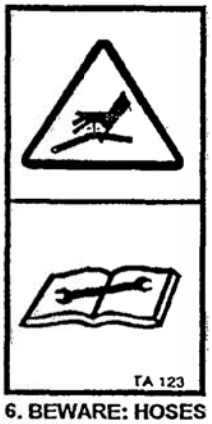
4.

4. DANGER STAND CLEAR

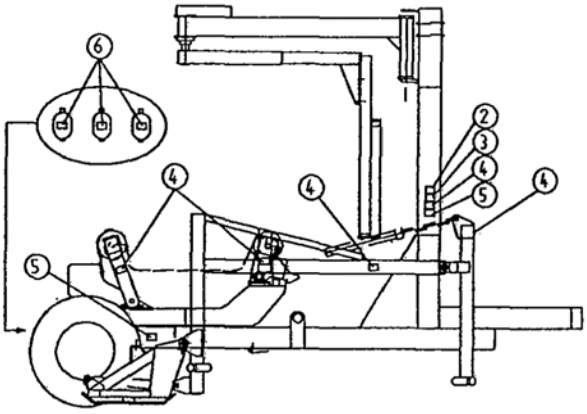
5.

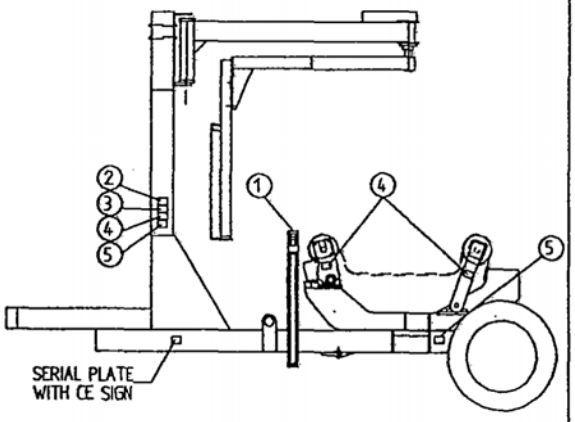
5. ENSURE THAT NUTS ARE KEPT THIGHT

6.

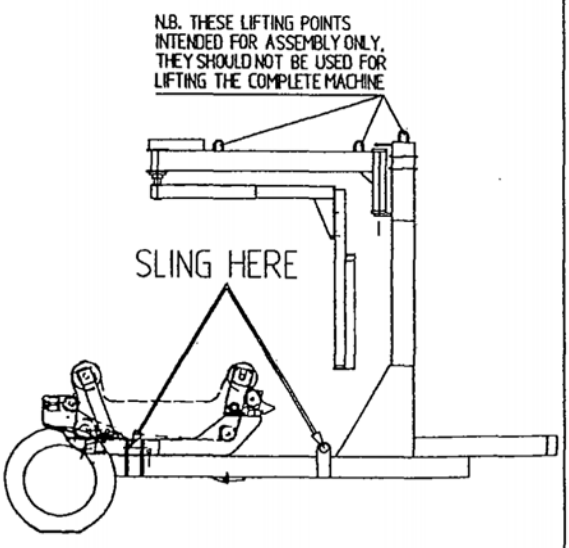


6. BEWARE: HOSES UNDER PRESSURE AT ALL TIMES





LIFTING INSTRUCTION



SAFETY FEATURES ON MACHINE

1. There are a number of safety features on the control software of the Cobra to assist with the safe operation of the machine:

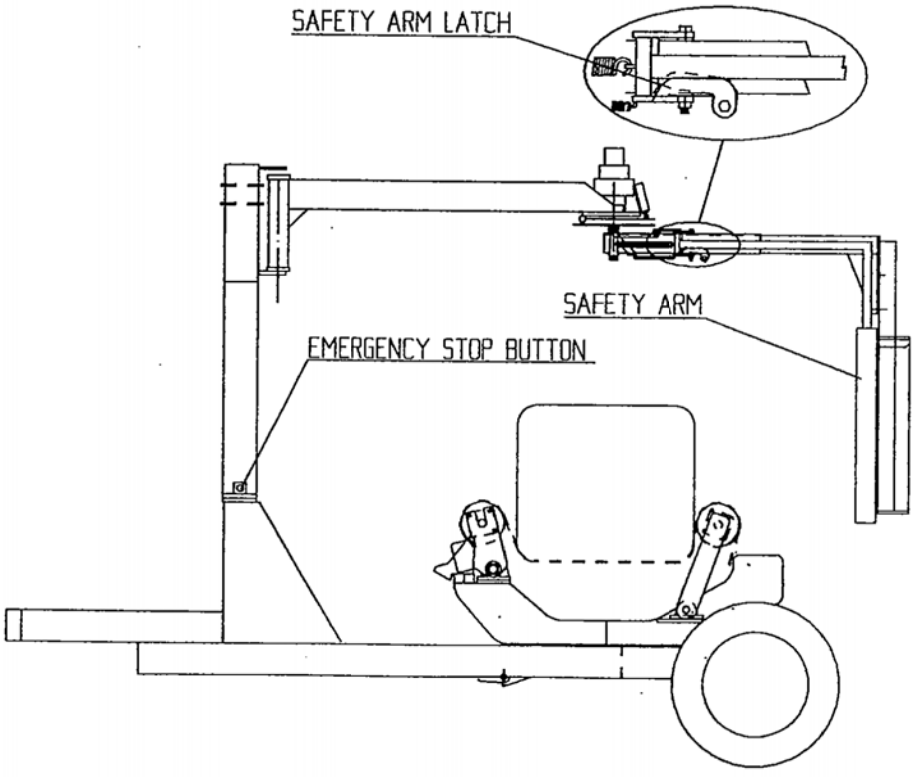
    a) While the dispenser mast is rotating the bale loading arm can only be raised a short distance off the ground, a sensor prevents it being raised to a point where it could strike the mast.

    b) When the loading arm is in the transport position i.e. in over the table, the gripper opening is the only loading arm function that will operate if the dispenser mast is in its inner most position. This restriction prevents any movement that could damage the film mast.

2. A safety arm rotates in front of the dispenser mast. If this strikes an object the dispenser mast will immediately stop. A latch holds the arm closed, this must be released before the wrapping can recommence (See fig below).
   Note: Before attempting to release latch stop tractor and operate switch to stop on the controller.

3. There is an emergency stop button in the front left hand side of the machine (See fig below). This will stop all functions on the machine. The switch locks when operated, twist to release. This switch should be pressed when any work is being carried out on machine.

4. The Cobra is fitted with a rotating beacon. This will operate at all times, it is switched off by pressing the emergency stop button.



SPECIAL SAFETY INSTURCTIONS

1. Stop engine of tractor before working on machine.

2. Put a suitable prop under raised platform before working in this area.

3. Always fully raise lift arm and ensure that rotating beacon is operating before transporting machine on public roads.

4. The Cobra is fitted with hydraulic bale ramp, it is essential that the hydraulic hoses is not disconnected from the hydraulic cylinder or hydraulic accumulator. This system is charged under pressure. Also, do not attempt to open the hydraulic accumulator as this is a pressurised unit.

OPERATING SAFETY INSTURCTIONS

1. Read and understand this manual before operating this machine.

2. Park dispenser mast over deck on front of machine when changing rolls of film. Take great care when putting end of film into cut and start unit.

3. Operators should have a hand on the controls at all times when machine is in use.

4. Keep onlookers clear of machine at all times. Danger zone is 5 metres.

5. Beware of rotating dispenser mast and all moving parts.

6. Do not exceed dispenser mast speed of 30 r.p.m.

7. Care must be taken when tipping bale from machine on sloping ground and during subsequent handling to ensure that they do not roll, thus causing hazard.

THINK OF YOUR PERSONAL SAFETY AND THAT OF OTHERS AT ALL TIMES!

CONNECTING TO TRACTOR

1. Attach Cobra drawbar to lower link arms of tractor. Tighten link arm stabilisers. Raise lift arms and turn parking leg into horizontal position.

2. Connect the feed and return hoses from the Autowrap valve to the tractors double acting facility. The tractors hydraulic pump should have a capacity of at least 35 ltr/min at 160 Bar, greater than this will improve machine performance.
   Note: The return hoses if fitted with a non-return valve to protect the Cobra from damage in the event of incorrect connection to tract hydraulics.

3. Mount controller in tractor cab in a convenient working position and where it is protected from moisture and dust.

4. Connect controller power lead to tractor battery terminals. It is important that the leads are connected with the correct polarity.

Note: To ensure maximum efficiency and length of lift of hydraulic components this machine requires a clean supply of hydraulic oil. It is recommended that the tractor hydraulic filter element be replaced and thereafter maintained in accordance with the manufacturers recommendations.

FILM OVERLAP SYSTEM

The Autowrap is fitted as standard with the 2 x 2 x 50% film overlap system. The machine is designed so the correct number of film layers are applied to the bale after a specific number of revolutions of the turntable. The number of revolutions required to wrap a bale depends on width of film being used and bale size.

For silage bales we recommend the application of a minimum of four layers of film.

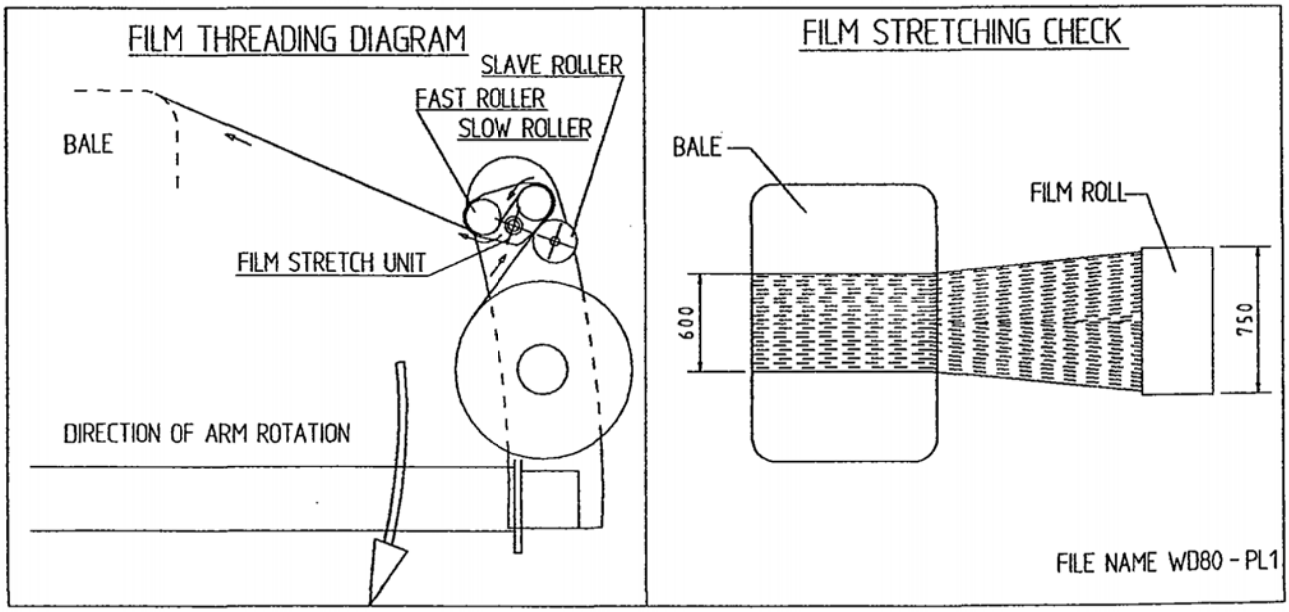
On Square and Rectangular Bales:

20 Revolutions of Dispenser Mast approximately applies 4 layers of film.
30 Revolutions of Dispenser Mast approximately applies 6 layers of film.

IMPORTANT

The above recommendations are only offered as a guide to correct wrapping of silage bales and the manufacturers accept no responsibility for variations that may arise and the consequence of same. They are based upon speed of up to 30 r.p.m, and a minimum film width of 600mm dispenser mast applied to end of bale when using 750mm wide film roll.

It is the responsibility of the operator to ensure that the correct number of wraps are applied, as variances can occur with fluctuations in speed of rotation, film quality and tensioning, shape and density of bale etc.



FIELD SETTING UP OF MACHINE

1. Setting up bale belt.

   There are many square balers on the market making a big range of bale sizes. For the purposes of setting up the Cobra Bale Wrapper, the bales are categorised into three different sizes, i.e. small, medium and large. The different makes and models in each category are listed below.

   There are three adjustments to be made to change the machine set up.

   - Big idler roller pivot brackets. These are mounted in slots on either side of the machine. For small bales the brackets are pushed fully to the inner end of the slots. For medium size bales the brackets are in the centre of the slots (check both sides are the same by measuring). For large bales the brackets are pushed to the outer ends of the slots (see diagrams).

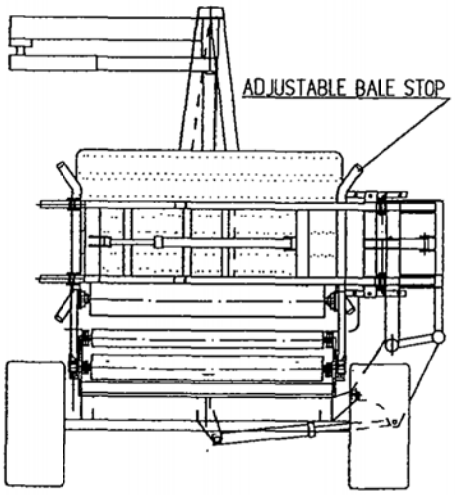
   - Medium Idler roller. There are two positions for this roller. For small and medium bales the roller is mounted in the outer position, for large bales it is mounted in the inner position (see diagram). The bearing in which this roller is running have slotted mounting holes. It is important that the mounting holes are pushed to the same end of the slots on both sides of the roller to ensure that the roller is running parallel to all the other rollers on the machine. If the rollers are not parallel it may cause belt tracking problems.

   - Belt tracking rollers. The belt tracking roller mounting has two positions. It is mounted in the inner holes for the small bales and in the outer holes for medium and large bales (see diagram). The tracking rollers can be finely adjusted within each mounting for the purposes of belt tracking. This adjustment should only be make when there is a problem with belt tracking, see separate belt tracking instructions.

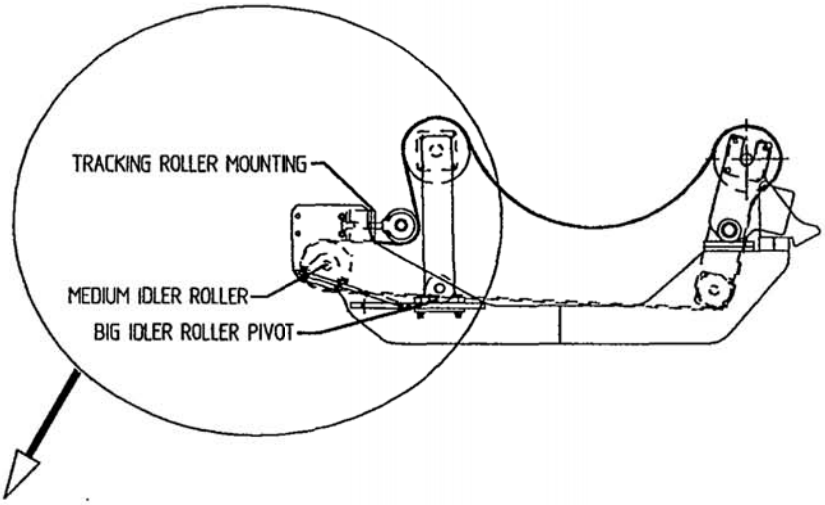
2. Fit roll of film and thread through film stretch unit as per diagram on film mast. Grip end of film in Cut and Start Unit by operating cut and start from Controller.

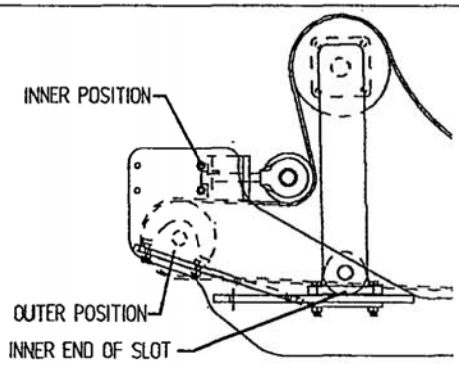
3. Check bale lengths.

   Ensure that bale length does not exceed 2m. For best performance of Cobra 1200 a bale length of 1.8m - 1.9m is advised. If shorter bales are to be wrapped the bale stop on the bale gripper arm may require moving. It should be set so the centre of the bale when loaded onto the machine corresponds with the centre of the belt. See Fig 1 below.

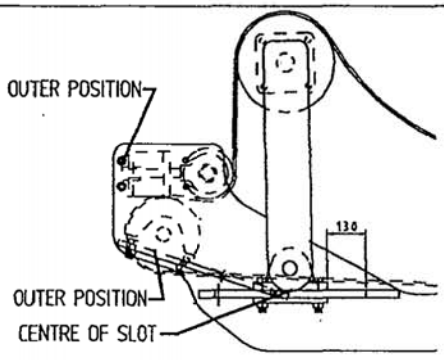


BALE BELT SET UP



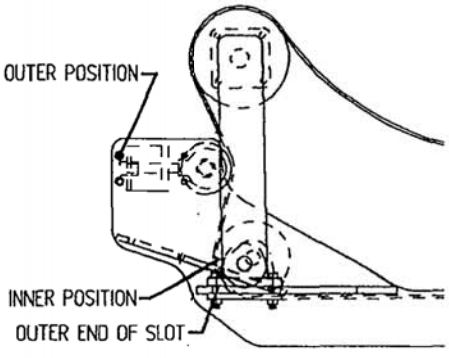


SMALL BALES
Hesston 4600, 4820
Claas Quadrant 1100
New Hollnad D710.



MEDIUM BALES
New Holland D1000, D1010
Hesston 4700, 4750, 4860
Vicon MP 800, MF5, MF185 MB
Mengele 530
Welger D4000
Krone Big Pack 80/80
Greenland 8080
John Deere 680.

Also the following bales in pairs:
Hesston 4600, 4820
Claas Quadrant 1100
New Holland D710

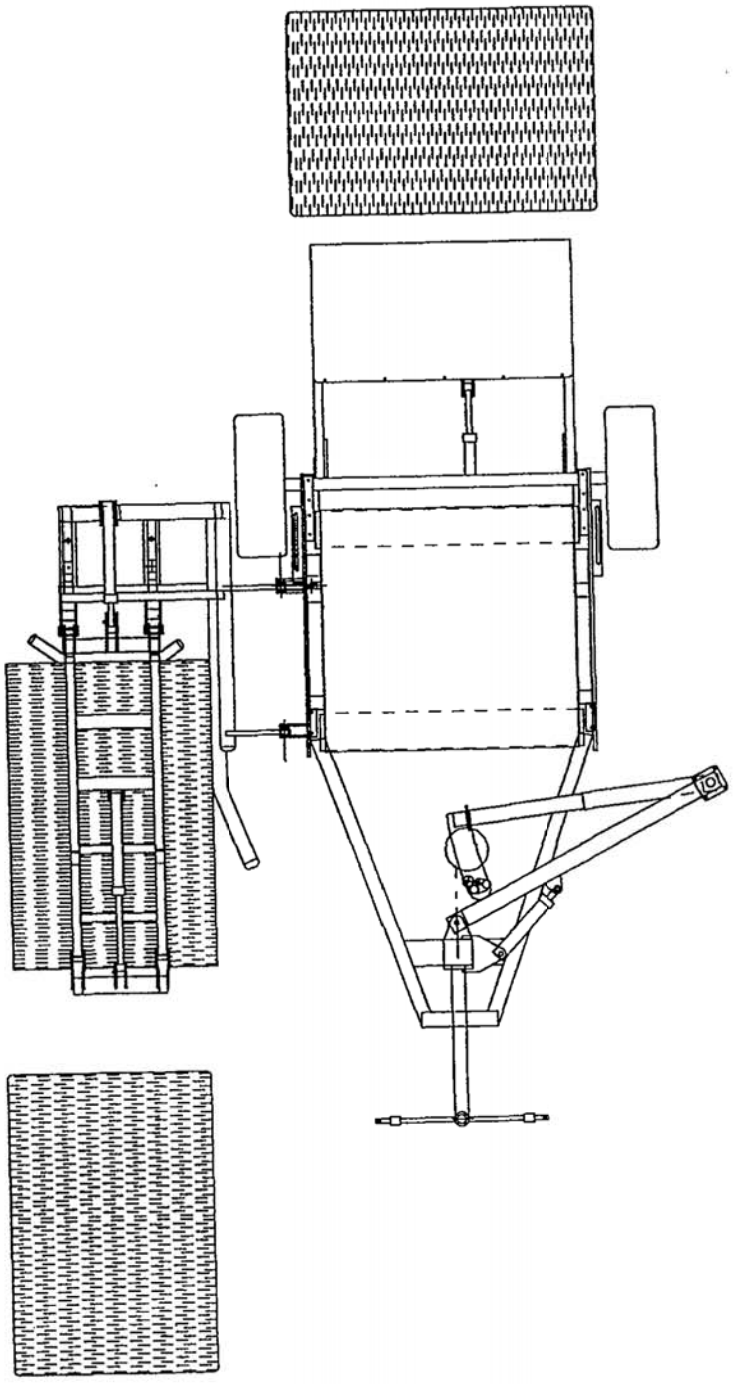


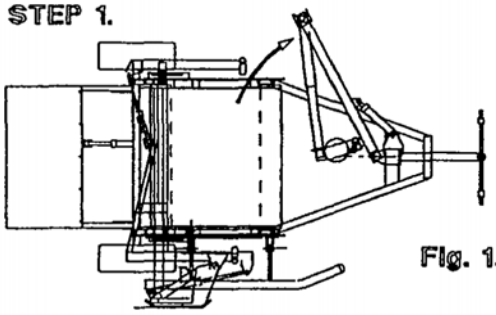
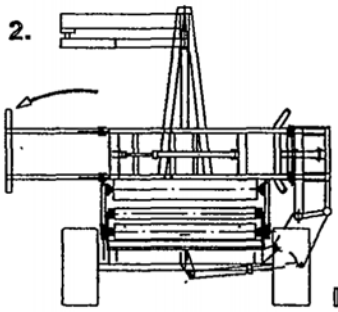
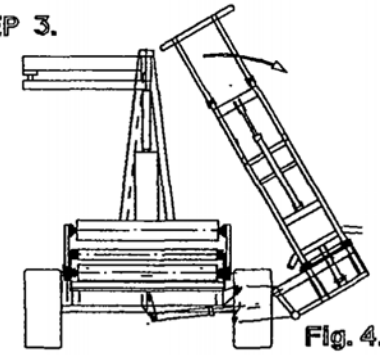
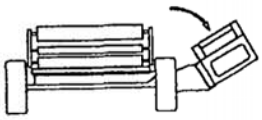
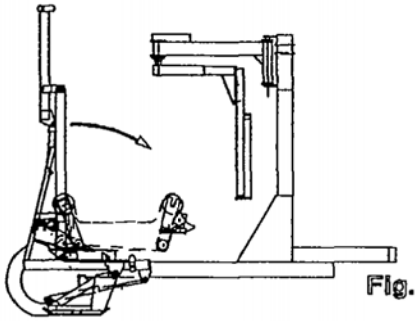
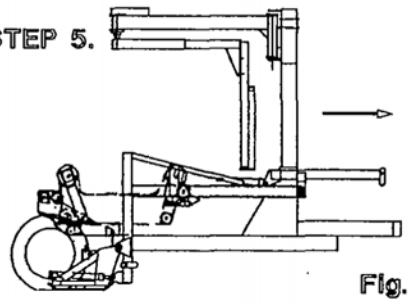
LARGE BALES
Claas Quadrant Q1200
Deutz Fhar 3.612
Mengele 550
Welger D6000
Hesston 4880
New Holland D1210
Krone Big Pack 120/80
Freeman 1590
John Deere 690

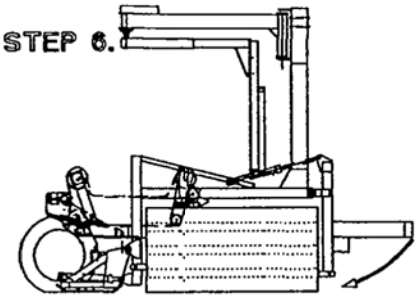
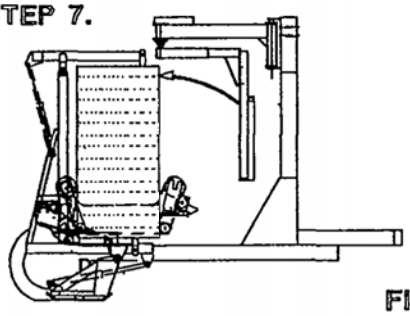
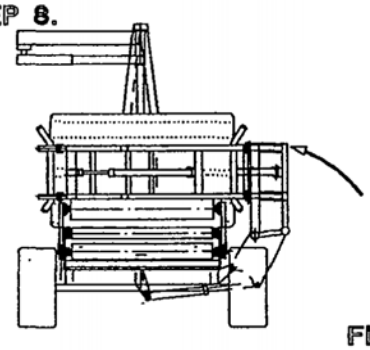
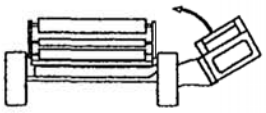
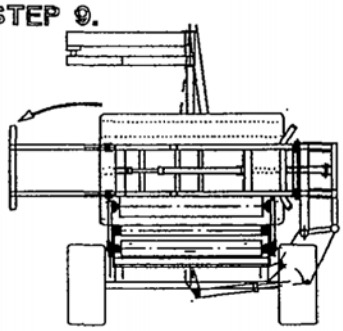
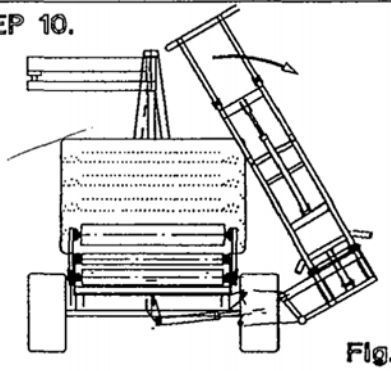
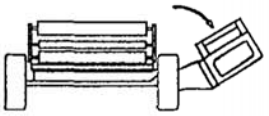
OPERATING INSTRUCTIONS

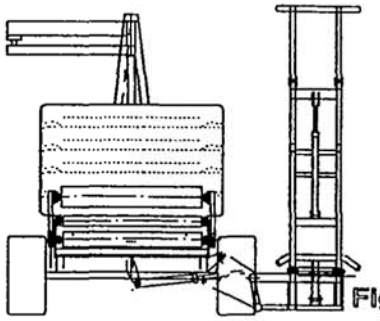
The Cobra Bale Wrapper can operate in Manual Mode i.e. by operating each function from switches on Controller and in a combination of manual and Automatic Modes. In this mode all three bale loading arm functions are performed manually by operating hold to run switches on controller. The bale wrapping cycle is performed automatically as is the bale tip off cycle.

The figure below shows that the bale is picked up on its length and tipped off at slight angles to this. The bales are thus conveniently orientated for picking up with a Tanco Square Bale Grab.



OPERATING INSTRUCTIONS		
DIAGRAM	DESCRIPTION	CONTROLLER SYMBOL
STEP 1.  Fig. 1.	**Rotate Film Mast to Side.**	
STEP 2.  Fig. 2.	**Open Bale Gripper.**	
STEP 3.  Fig. 4.	**Lower Lift Arm to Ground.** Note: Arm will stop just before it reaches the ground. Operate switch again to get it to continue to ground.	
STEP 4.  Fig. 4.	**Lower Gripper Frame to Horizontal.**	
STEP 5.  Fig. 5.	**Drive up to bale, Stop when Bale back stop strikes Bale.**	

OPERATING INSTRUCTIONS		
DIAGRAM	DESCRIPTION	CONTROLLER SYMBOL
STEP 6.  Fig. 6.	**Close Bale Gripper.**	
STEP 7.  Fig. 7.	**Raise Bale to Vertical Position by Raising Gripper Frame.**	
STEP 8.  Fig. 8.	**Lower Bale onto Table by Raising Lift Arm.**	
STEP 9.  Fig. 9.	**Open Bale Gripper.**	
STEP 10.  Fig. 10.	**Lower Lift Arm to Ground.**	

	OPERATING INSTRUCTIONS	
DIAGRAM	DESCRIPTION	CONTROLLER SYMBOL
STEP 11.  Fig. 11.	**The Automatic Wrap cycle can be started when the Lift Arm is in this Position.**	AUTO START

THE AUTOMATIC WRAP CYCLE AND AUTOMATIC TIP CYCLE OF THE COBRA WRAPPER IS AS FOLLOWS:

Wrap Cycle:

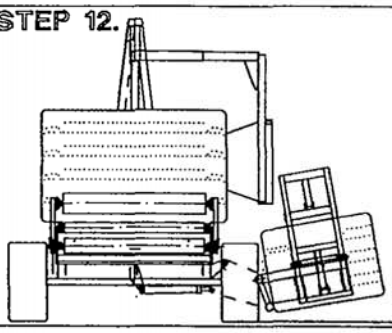
1. Film mast swings into working position.
2. The film mast does a pre-set number of revolutions 20 revolutions for 4 layers of film on bale. 30 revolutions for 6 layers of film on bale.
3. The film mast swings out.
4. The cut and start cuts and grips the end of the film.

Tip Cycle:

1. The bale table tips up.
2. The bale drops onto the bale ramp.
3. The bale ramp descends t the ground.
4. The bale ramp tips.
5. The bale table descends.
6. The tip section of the bale ramp descends and the frame rises.

Note: The machine automatic cycles can be stopped at any time by operating the **STOP** Switch on the controller. The cycle can be recommenced from where it stopped by operating the AUTO START switch.

This can be used to stop the machine automatically tipping off the bale in an inappropriate place.

STEP 12.  Fig. 12.	**Note Bale can be Gripped (See Step 6) and raised 100mm ground and carried until wrap cycle is completed. This will reduce cycle time.**	
	Go to Step 7 and continue sequence from there.	

SERVICE AND MAINTENANCE

1. All nuts and bolts should be tightened after one hour in use and thereafter regularly.

2. Wheel pressure should be normally kept at 3.5 bar depending on bale weight and field conditions.

3. Inspect moving parts for wear on daily basis.

4. Lubrication:

Drive chain & sprocket	-	Grease every 24 hours.
Main rollers	-	Grease every 24 hours.
Hinge pins on Lift Arm	-	Grease every 24 hours.
Hinge pins on main tip frame	-	Grease every 24 hours.
Hydraulic rams	-	Grease every 24 hours.
Film spool assembly	-	Grease every 24 hours.
Dispenser gearboxes	-	Grease every 24 hours.

5. Adjustments:

Roller drive chain	-	Adjust after first days work then check/adjust every 50 hours. See Fig. 2.
Main bale belt	-	See belt tracking instructions.

6. Film Dispenser:

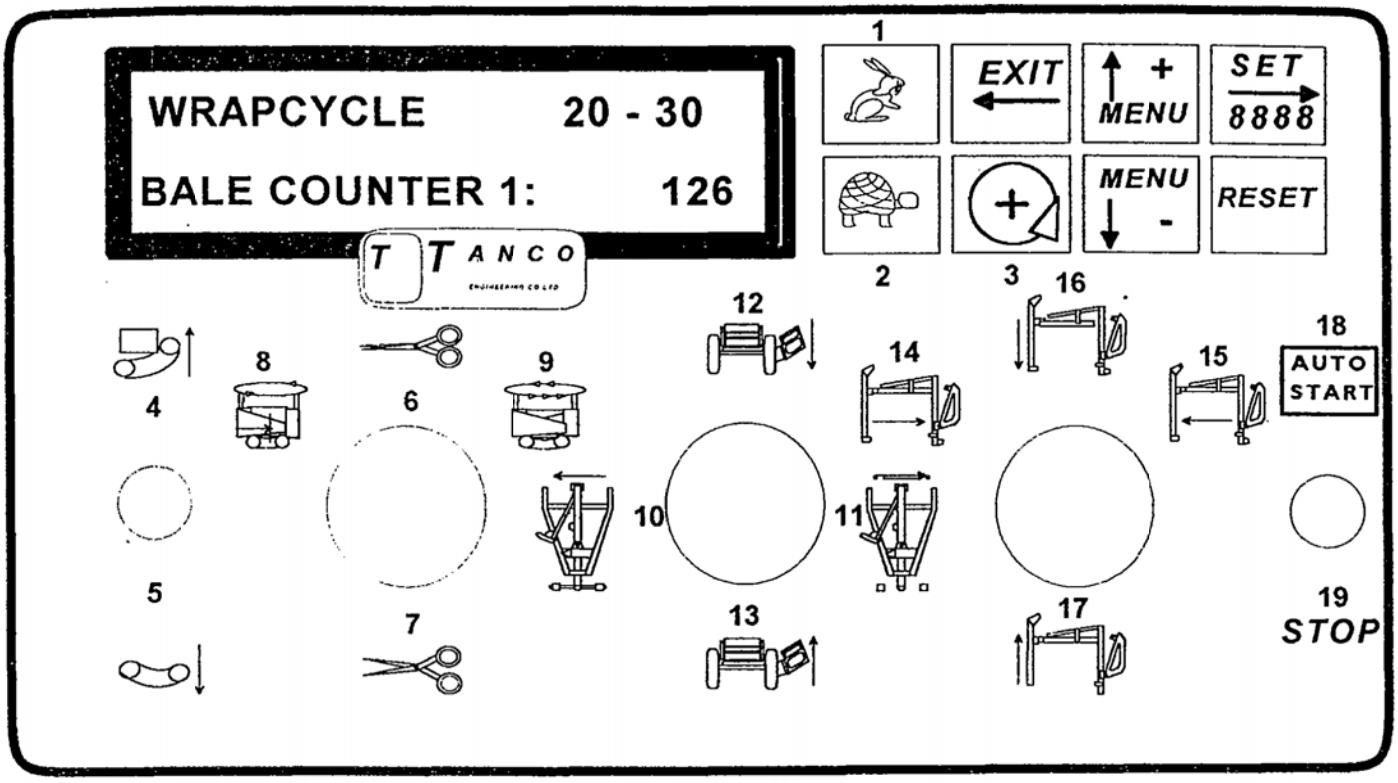
   Fit with marked gearbox at top.
   Apply one shot of grease every 500 bales. Use only **NLGI O GRADE LITHIUM GREASE**. We recommend **SILKOLENE G46 SL EP** grease or approved equivalent, i.e. **ESSO BACON EPO**. Wash rollers often to avoid build up of Tack from film using petrol. Follow film threading diagram. See Fig. 1.

7. Hydraulic System:

   After 25 hours max. it will be necessary to replace the element in Cobra hydraulic filter. For maintenance purposes it is necessary to change the element after 200 working hours.

   The element cannot be just cleaned and put back into the filter.

   Check hydraulic hoses for damage separately and replace if any damage is found.

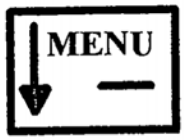


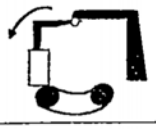
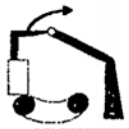
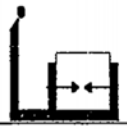
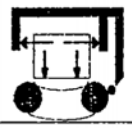
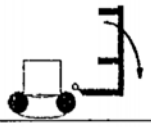
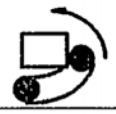
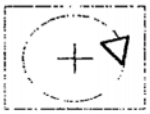
1 Wrapping speed incrementation.
2 Wrapping speed reduction.
3 Additional film turns.
4 Manual bale offloading
5 Tip table to horizontal position.
6 Film cutter close.
7 Film cutter open.
8 Wrapping-arm positioning
9 Manual wrapping.
10 Tower offload position
11 Tower wrapping position
12 Load-arm down
13 Load-arm up
14 Bale grap
15 Bale release
16 Lower grap
17 Raise grap
18 Auto cycle start.
19 Cycle stop.

The TANCO wrap control system is developed with the intension of assisting the operator to maintain full control of the machine. The system provides for detailed instruction and messages via the 40 character alpha-numeric display, enabling the operator to monitor the operation of the wrapmachine at any instant even when trailed behind a baler.

The system is equipped with various test programmes, warning messages, error messages and instructions which makes the system superior in terms of facilities, service and operation.

THE DISPLAY UNIT AND PANEL FUNCTIONS

FUNCTION PRESELECT	DESCRIPTION
	The menu scroll up/down key. Is used to search for the mode the operator wishes to view.It is also used for incrementing values such as required number of film layers and other machine parameters when in the SET mode.
	The menu scroll up/down key. Is used to search for the mode the operator wishes to view.It is also used for decrementing values such as required number of film layers and other machine parameters when in the SET mode.
	The SET key is used to enter the SET mode and to reset values in for example the bale counters.
	When in " SET " mode, this is used to exit the "SET" mode or to return to a previous programming level.
	Is used to reset or cancle all registered filmlayers applied to the bale in a cycle.
	Activates the film cut/ hold devices for manual operation.
	Manual load arm up. Activates the LOADARM for manual operation.The LOADARM function will remain active while the " MAN " manual function switch is activated.
	Manual load arm down. Activates the LOADARM for manual operation.The LOADARM function will remain active while the " MAN " manual function switch is activated.
	Manual wrap arm run. The speed will commence in slow speed and then accelerate to maximum. When the manual wrapping is completed the speed will retur to slow after which the wrap arm will stop. The wrapping will only remain while the MANUAL is activated.

	Manual wrap arm slow run. The speed will remain slow. The wrapping will remain until the wrapping arms are in normal stop position after the MANUAL SWITCH is deactivated. A one pulse activation on this switch will always cause the wrapping arm to seek next position with a minimum of the defined number of film layers before film release in order to have suffecient time to operate the film cutter devices.
	Tower out manual function. Other functions such as load and offload are accessable provided that the tower is in the required position defined in the machine programme.
	Tower in. Manual function. Other functions such as load and offload are accessable provided that the tower is in the required position defined in the machine programme.
	Manual bale squeese function, load cycle.
	Manual bale release function, load cycle.
	Manual elbow raise function, load cycle.
	Manual lower elbow function, load cycle.
	Manual bale offload function. The function is only accessable provided that the tower, loadarm and wraparm are in their required positions.
	Manual table tip to horizontal function. The function is only accessable provided that the tower, loadarm and wraparm are in their required positions.
	Additional film layers. During the machine operation each push on this button will increase the film programme number by one layer for the cycle in question. After a completed cycle a push on this switch followed by a AUTO START command will always cause the wrapping cycle to restart an proceed with a with a minimum of revolutions equal to the film release number. If the system has been reset and a bale is positioned on the table but not presented by the **BALE ON SYMBOL** (0) symbol on the top right hand cormer of the display, pressing this button for 6 seconds will call up this symbol and the controller will now recognize that a bale is placed on the machine and the cycle may now be started.

	Wrap speed incrementation. For each activation on this button the wrap speed will be incremented. The maximum speed optainable is specified in the service level not accesable to the user. The minimum speed is approximately 12 Rpm. The display will show the requested and actual speed when the operator uses the speed increment and decrement buttons. The system will then aim at locking on to that speed.
	Wrap speed decrementation. For each activation on this button the wrap speed will be decremented. The maximum speed optainable is specified in the service level not accesable to the user. The minimum speed is approximately 12 Rpm. The display will show the requested and actual speed when the operator uses the speed increment and decrement buttons. The system will then aim at locking on to that speed.
AUTO START	The START switch will initiate the AUTOMATIC cycle. It may also be used to cut the cycle Wrap cycle short. **Example:** The wrapping cycle is set to 30 filmlayers. The operator wishes to stop the cycle and offload the bale using only the automatic facilities of the system as the machine is positioned behind the Baler and therefore not practically operated in the manual mode. Activating the START switch during an automatic cycle, will cause the controller to consider the bale as completed and the machine will position the wrapping arm when ready. The display will now state that it is ready for offloading. When the wrap arm is positioned yet a START command will offload the bale.

MODES OF OPERATION.

The system is designed so that the automatic mode and the manual mode is seperated by a STANDBY MODE. This means that when operated in the automatic mode, all manual commands are ignored with the exception of AUTO START, STOP, BALE SQUEESE, RELEASE, LOADARM UP, DOWN, WRAP ARM SPEED ADJUSTMENTS and the application of additional film layers, all other manual functions are only accessable when in standby mode.

STANDBY MODE.

Standby mode is the waiting state between the Auto and the Manual mode. Standby mode is automatically resumed when :

1. An automatic cycle is completed.

2. Between cycle steps, Example: The wrapping cycle is completed and the system announces that it is ready to offload the bale. ***It is here in STANDBY for a operator command*** for manual or automatic function . A START command will instruct the machine to advance to the next logical step in the auto cycle, namely the offloading of the bale.

3. Stopping the cycle will at any stage bring the system into standby mode.

MANUAL MODE

The manual mode is accessed by activating one of the manual function keys. When first a manual function switch is activated this function is excecuted provided that it is a " legal " operation. If the operator requets an illegal function such as offloading a bale while the Wrapping arm and or the tower, not are in position the system will refuse to perform the operation and state in the display the reason for the refusal, enabeling the operator to correct the machine status before the requested function can be made active.

The machine is generally required operated automatically. The controlling system will with its standard factory settings, automatically control the machine with START commands. For every programme step, the machine has completed, the machine will stop and await further command from the operator. During a normal automatic cycle the machine will via both the audio alarm and display messages, inform the operator that the wrapping cycle has now been completed and write the display message " READY TO OFFLOAD:" At this stage yet a START command will cause the bale to be offloaded.

THE DISPLAY MENUES.

At the operator level there is a number of menues which enables the operator to perform various tests and adjustments to the machine operation. Should adjustments of parameters which not are accessable to the operator be required, please contact the TANCO dealer or TANCO.

DISPLAY INDICATION		FOR NEXT VIEW	DESCRIPTION.
WRAP CYCLE 15 : 20 0 BALES : 1 324		MENU	This operative display shows the commonly most needed information. The number 15 indicates the actual number of applied film layers at this instant. The number 20 is the operator programmed film layer requirement. The number 1 is the bale counter in use and the number 324 is the quantity of bales registred in counter number 1. The "O" (zero) in the top right hand cornor means that there is a bale positioned on the table.

BACK WARDS rotation on rotate to position switch.		MENU —	When this display is shown, the wraparm reverse function is accessable on the wraparm positioning switch. In order to return to narmal operational mode, push the MENU + button once or the EXIT button for 1 second.
ACTIVATED: **NO FUNCTIONS ACTIVE.**		MENU —	This operative display shows at all times which function the machine operates at present. This feature enables the operator to monitor the stage the machine is at during a cycle. It is also of great assistance should it be nessecary to determine which relay outputs should be active for a given function.
ACTUAL RPM 10 **WANTED (MAX.25) : 10**		MENU —	Actual Rpm is the speed at which the wraparm is rotating at present. Max 22 is the maximum speed the system is programmed to achive. The 10 to the right of the (max 22) is the operator adjusted speed level which the controller then will maintain.
BALE COUNTERS **Press SET to enter.**		MENU —	The system contains 10 bale counters. When this display is shown, it is possible to inspect the sum of all bale counters. Machine total (the sum of all bales ever made on the machine.) and the quantity of each individual bale counter.
SETUP **Press SET to enter.**		MENU —	This is the **operator service level**. When in this mode the operator is able to engage / disengage the various sensors. Also variables such as load arm, cutter and tip timer functions may here be set or adjusted.
HARDWARE TEST **Press set to enter.**			The hardware test programme is a tool facility enabeling and guides the operator and service people to test and inspect allmost all functions, switches and push buttons on the system. It also contains a battery supply voltmeter which automatically will be displayed should the voltage drop below 8 volt during the operation.

SETTING UP THE SYSTEM:

All functions are preadjusted from the TANCO factory and commonly the only adjustments which the operator needs to make, is the programmed number of film layers required or the wrap speed adjustments when required.

TYPICAL OPERATOR PROGRAMMATION. (standard for all machine versions.)

1: Required number of film layers. (changing from 20 to 25 layers.)
2: Bale counter selection.

DISPLAY INDICATION.	PUSH BUTTON OPERATIONS	DESCRIPTION.
WRAP CYCLE 0 :20 0 BALES : 1 324		To enter programming mode, push and hold this button for 1 second. The highest value in the programme number will now flash, meaning that it may now be changed. As the number is to be changed from 20 to 25 layers the number 2 is not required changed therefore push the " SET" again to make the lowest number value "0" changeable.
WRAP CYCLE 0 : 20 0 BALES : 1 324		The lowest value number will now flash , meaning that it may now be changed. Now use the MENU buttons to increase or decrease the value.
WRAP CYCLE 0 : 25 0 BALES : 1 324		Pushing MENU UP will increment the number between 0 and 9. Similary MENU DOWN will decrement the number between 9 and 0. In this case push MENU UP 5 times to change the number from 0 to 5.
WRAP CYCLE 0 : 25 0 BALES : 1 324		To exit programmation of required film layers push the EXIT button. The balecounter number (in this case counter number 1) will then flash and the counter number is now changeable. The unit contains 9 individual counters and 1 counter for the sum of bales. The MENU UP or DOWN key is used to change the number. If the same counter is to be used push EXIT again.
WRAP CYCLE 0 : 25 0 BALES : 2 125		It is shown that the counter chosen is counter number 2. This counter containes a quantity of 125 bales, stored in the memory. If it is required to continue the count from this quantity and onwards, push EXIT to return to operative mode, or ZERO the counter on the MENU up or DOWN key and then EXIT to return to operative.

A TYPICAL WRAP CYCLE .

When a bale is offloaded from the wrapper, the controller will on the display state that it now is ready for reloading a new bale and the audio alarm will sound in order to attract the operator attention so that he knows that the machine is ready for the next working sequence.

1: With the loadarm in the horizontal position and the grap opened, the machine is brought to the bale. The grap is closed manually using the joy-stick.

2: The Loadarm is raised manually and stops in the standby position.

3: The Elbow may now be raised manually using the joy-stick, provided that the table is free, the loadarm will be allowed to load that bale onto the table. If not free, the loadarm will remain in the " standby position" Lifing the loadarm above the" standby position" will only be permitted if no bale is located on the table, is offloaded.

4: Upon an Auto start command, the wrapping cycle will now commence, starting in slow speed and gradually increase until the programmed speed level is reached and complete the cycle according to the programme The speed will reduce when the programmed number of film turns is reached, minus one (n-1) and stop with the wraparm in the parked position waiting for an offload command from the operator.

5: Now that the wrapping cycle is completed the machine will standby for an offload command from the operator on the Auto start switch.

6: The Controller display will now state that the bale is ready for offloading and the audio alarm will sound in order to attract the operator attension. The auto start command is given, the table now tips up in to offload the bale and thereafter return to horizontal position.

7: Cycle restart.

NOTE! Auto load and Auto offload and Auto wrap start may also be used, which reduces the operation to the cycle start.

INTERRUPTED CYCLES:

A cycle which has been interrupted may at any instant be restarted. The system memorises the last step in a cycle sequence even when the cycle is a combination of automatic and manually operated functions.

The system programme will assure that no illegal functions are being conducted.

ERROR MESSAGES ON THE DISPLAY.

The machine monitors via the sensors the status of every individual moving part of the machine. Should the expected position or status of a sensor or device not comply with the safty requirements specified in the software, then the system will stop the machine cycle at the point where an error has occourred or if the operator requests an illegal or hazardous command. It will then on the display state the operational error.

EXAMPLE:

A bale has been wrapped in the manual mode. The operator stops the wrapping cycle with the wraparm positioned away from the wrap arm sensor. If an offload command then is given, the system will via the display announce that this is an illegal command, writing **"WRAP ARM NOT IN POSITION."**

In order to bring the machine into the correct status the operator must then give the system a wraparm position command on the **MANUAL POSITIONING SWITCH** which will make the wraparm seek the parking position (off loading position.)

Similary if a manual wrapcycle is requested and the table is not horizontally positioned, the system will not permit this operation and therefore state the reason for the refusal in the display.

TROUBLE SHOOTING USING THE HARDWARE TEST PROGRAMME.

Press the **MENU - button** untill the display shows **HARDWARE TEST**. Press now the SET button to gain access and again press the **MENU- button** until the display shows the required test programme.

The system **HARDWARE TESTPROGRAMME** is a operator accessable test programme which is intended as a self help assistance facility. Combined with the display messages, it makes trouble shooting a less complicated matter. It contains the following:

1. BUILD IN VOLTMETER

Is currently monitoring the battery supply voltage from the tractor battery. The voltmeter will simultaneously diplay :

A. The instantaneous battery voltage (off load, inactive hydraulics and on load, active hydraulics.)
B. The most resent voltage drop caused by activating the hydraulics.
C. The display will in case of a sudden voltage drop below 8 volt, show the value of the supply at this instant and simultaneously sound the audio alarm.

DISPLAY		
Voltage level	13.4 volt	Supply level at this instant.
Last drop	9.7 volt	Supply level at the point of activation of hydraulics.

2. SENSOR STATUS.

This programme enables the operator to test if the system reads the individual sensors. An inactive sensor will produce a "0" indication where an active sensor will produce a "1" statement. Thus if it is required to test eg. the machine tilt sensor then use the **MENU buttons** to find the display which states the below indicated and then perform the manual operation or activate the sensor with a magnet. The status chance will then be shown as a **0 to 1** status change.

DISPLAY

TABLE HORIZ, NO.1:0
INFRARED REC, NO.2:1

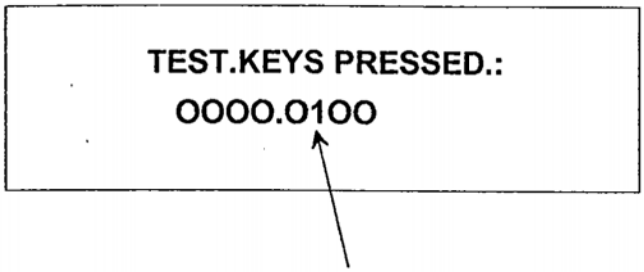
IT IS HERE SHOWN THAT THE TIP SENSOR TERMINATED IN SENSOR INPUT TERMINAL NUMBER 1, IS INACTIVE (TABLE IS TILTED) AND THAT THE INFRARED RECIEVER TERMINATED IN SENSOR INPUT NUMBER 2 IS ACTIVE (THE TRANSMITTER IS ACTIVE ANI RECIEVER IS RECIEVING.)

SETUP **Press SET to enter**		**Now push the MENU DOWN key X number of times until the sensor engage / disengage section appears and engage the tail-gate sensor.**
SENSOR NAME		***SENSOR FUNCTION***
FILM MAST-IN SENSOR INSTALLED	**yes**	Determines if the mast is in the correct position for the wrap cycle to commence and loadarm to raise above standby position.
FILM MAST-OUT SENSOR INSTALLED	**yes**	Determines if the mast is in the correct position for the wrap cycle to commence and loadarm to raise above standby position.
LOADARM DOWN SENSOR INSTALLED:	**yes.**	Upon this signal the system that the loadarm is clear from the wrap arm and the wrap cycle is now alloewd to commence
TABLE HORIZONTAL SENSOR INSTALLED:	**yes**	Governs the correct position of the table when loading, offloading and monitors if tower and loadarm activation is legal.
MULTI PULSE ROTATION SENSOR INSTALLED.	**yes**	Wrap-arm speed reference sensor. Monitors the speed of the wrapping arm and determines the point of speed reduction and cutter activation during the beginning and the end of a cycle.
ROTATE SENSOR (1PULSE / REV.) INSTALLED: YES	yes	Wrap-arm position reference sensor. Counts the film layers applied and determines the stop / parking position of the wraparm.
WARNING!		All sensors installed on the machine, should under all normal circumstances be engaged. The sensor engage / disengage facility is only intended as an aid for the operator in case of a defect sensor as provides for access to operate manually the machine in those steps where a sensor is defect provided it has been disengaged.

3. TESTING THE CONTROL PANEL PUSH BUTTONS.

When the display shown below is shown, an activation of the function select buttons will cause the display to write which function select button is pushed. The menu and programming buttons maintains their original purpose and the only button which will show a status change is the " reset / extra film layer button".

DISPLAY.

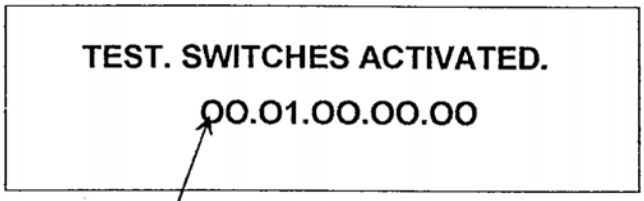


The " 1" status indicates that the " reset / extra film layer " button is activated.

4. TESTING THE OPERATION SWITCHES.

When the display below is shown, an activation of the individual manual operation switches and Start switch will cause the display to write the status change of the manual operation switch.

DISPLAY.

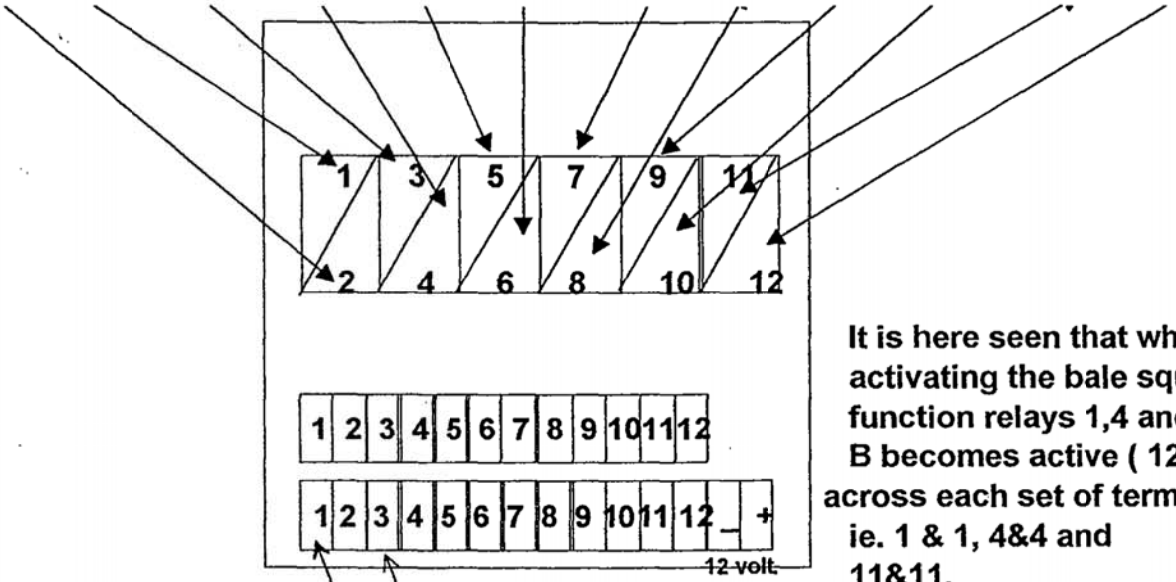


The " 1" status indicates that the cutter close is activated.
Each status digit represents a specific switch

5. RELAY OUTPUT STATUS

Indicates which hydraulic valves should be active when any operation is commanded. The operator / service man, is then from this information able to determine wether the output signal to a valve is missing or if a valve is seased or defect. The status of the output is shown as the terminal number.

Relay no	Relay no	Relay no	Relay no	Relay no	Relay no	Relay no	Relay no	Relay no	Relay no	Relay no	Relay no
1 rotor lamp	2 fwd. rev.	3 func. fwd.	4 func. rev.	5 wrap forward	6 wrap reverse	7 Cutter	8 table tip	9 Load arm	10 elbow	11 bale release	12 film mast



It is here seen that when activating the bale squeese function relays 1,4 and B becomes active (12 volt across each set of terminals) ie. 1 & 1, 4&4 and 11&11.

TEST RELAYS. 0= OFF

1004.0000.00B0 (12)

(BALE SQUEESE).

DISPLAY SHOWS.

	FUNCTIONS ACTIVATED ON CONTROL PANEL.	DISPLAY SHOWS ACTIVATED TERMINALS / OUTPUTS. (terminal 1234.5678.9ABC)
1	Elbow down	(terminal 1004.0000.0A00)
2	Elbow up	(terminal 1030.0000.0A00)
3	Grap bale	(terminal 1004.0000.00B0)
4	Release bale	(terminal 1030.0000.00B0)
5	load arm down	(terminal 1004.0000.9000)
6	load arm up	(terminal 1030.0000.9000)

	FUNCTIONS ACTIVATED ON CONTROL PANEL.	DISPLAY SHOWS ACTIVATED TERMINALS / OUTPUTS. (terminal 1234.5678.9ABC)
7	Wrap-arm forward	(terminal 1200.5000.0000)
8	Wrap-arm reverse	Not displayed.
9	cutter close	(terminal 1030.0070.0000)
10	cutter open	(terminal 1004.0070.0000)
11	Tower in	(terminal 1030.0000.000C)
12	Tower out	(terminal 1004.0000.000C)
13	tip up	(terminal 1030.0008.0000)
14	tip down	(terminal 1004.0008.0000)

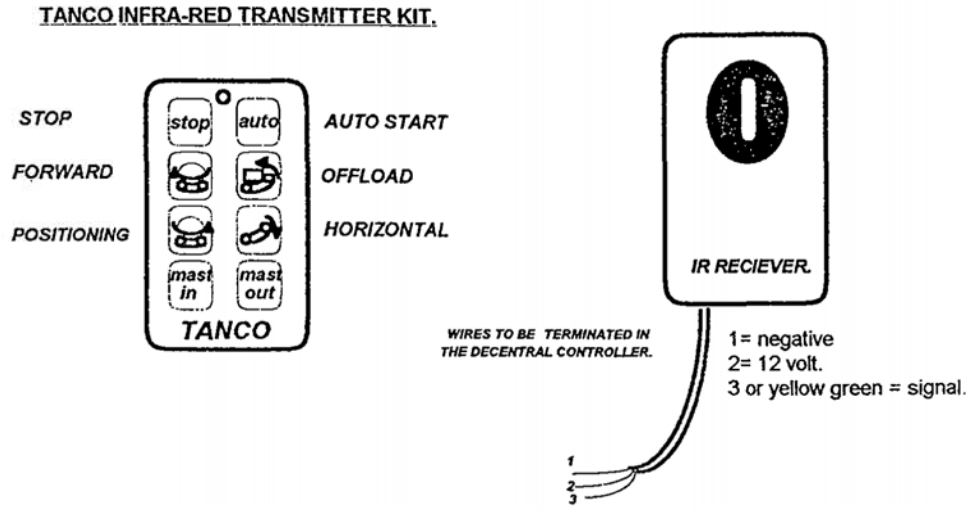
TESTING THE INDIVIDUAL RELAYS.

When in the relay hardware test, then to activate the individual relay test, press the **SET button** for 2 seconds to gain access. Press **MENU** to activate the first relay and press **MENU** again to deactivate the relay.

To gain access to the testing of the next relay, press **SET button** again, the display will now flash the relay number which now may be activated., activate the relay on the **MENU button** and deactivate on the **MENU button** again.

THE INFRA - RED RECIEVER / TRANSMITTER SET.

The reciever is connected directly to the monitor via the 4 pole connector mounted on the tail.
The transmition radius is stated at 30 meters. The actual radius may be much longer depending on the battery condition. Sun filtered windscreens on the tractor will reduce the transmission distance further.

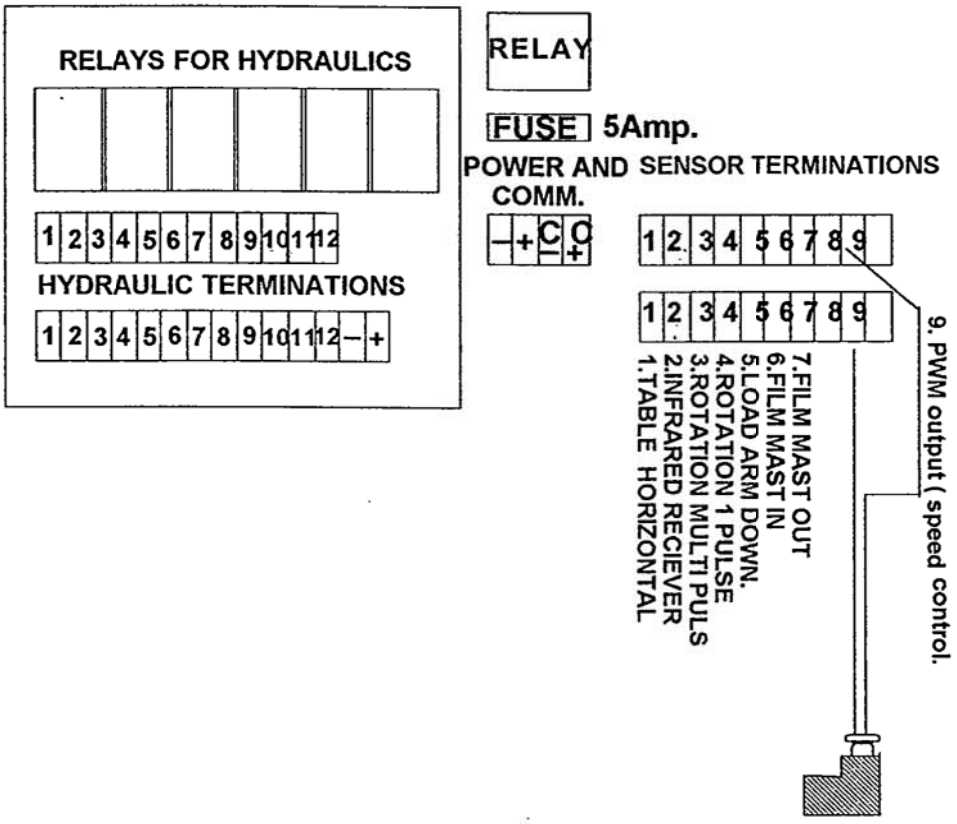


DISPLAY ERROR MESSAGES.

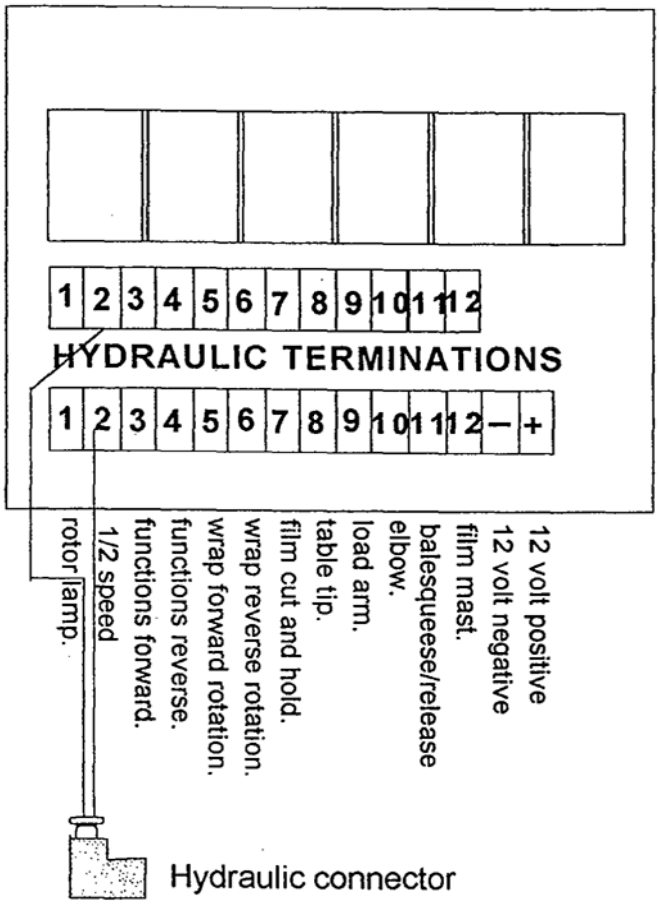
DISPLAY MESSAGE.	EXPLANATION.
NO CONNECTION	When the communication between the monitor and the controller is absent. Check the connector pins in the 4 pole phone plug and the terminals on the motherboard.
VOLTAGEDROP TO:xx.xV	The load provided by the hydraulic circuit has caused the battery voltage to drop to a level below the acceptavle limit. (8 volt.) 1. The tractor generator may be defect. 2. The tractor engine Rpm may be too low for the generator to charge the battery. 3. The supply cable termination onto the battery may be poor or dirty. Check terminations and go to the hardware test programme to inspect the battery supply voltage in unloaded condition and loaded condition.
TABLE TILT TIMEOUT!	Indicates that the table tilt hydraulic function has not been activated on the controller command. A timeout message means that an associated sensor has not recieved an expected signal within a preset periode. 1. The valve may be defect or hanging. 2. The relay output may be defect. 3. The Hydraulic connector may have fallen off. 4. The cable may be broken. 5. The hydraulic connector may be defect. Test that the output supply is available on the associated relay terminals, and hydraulic connector.
LOAD ARM TIMEOUT !	As above.
TOWER NOT OUT !	As above. Or may also be required moved manually if positioned in parking position.
NO ROTATE PULSES !	As above.
WRAPARM NOT IN POS.	As above.
LOADARM NOT IN POS.	As above.
TABLE NOT HORIZONT.	As above.
	OTHER SIMILAR MESSAGES MAY OCCOUR.

TECHNICAL DETAILS.

TERMINAL DESIGNATION
SENSORS AND HYDRAULICS.



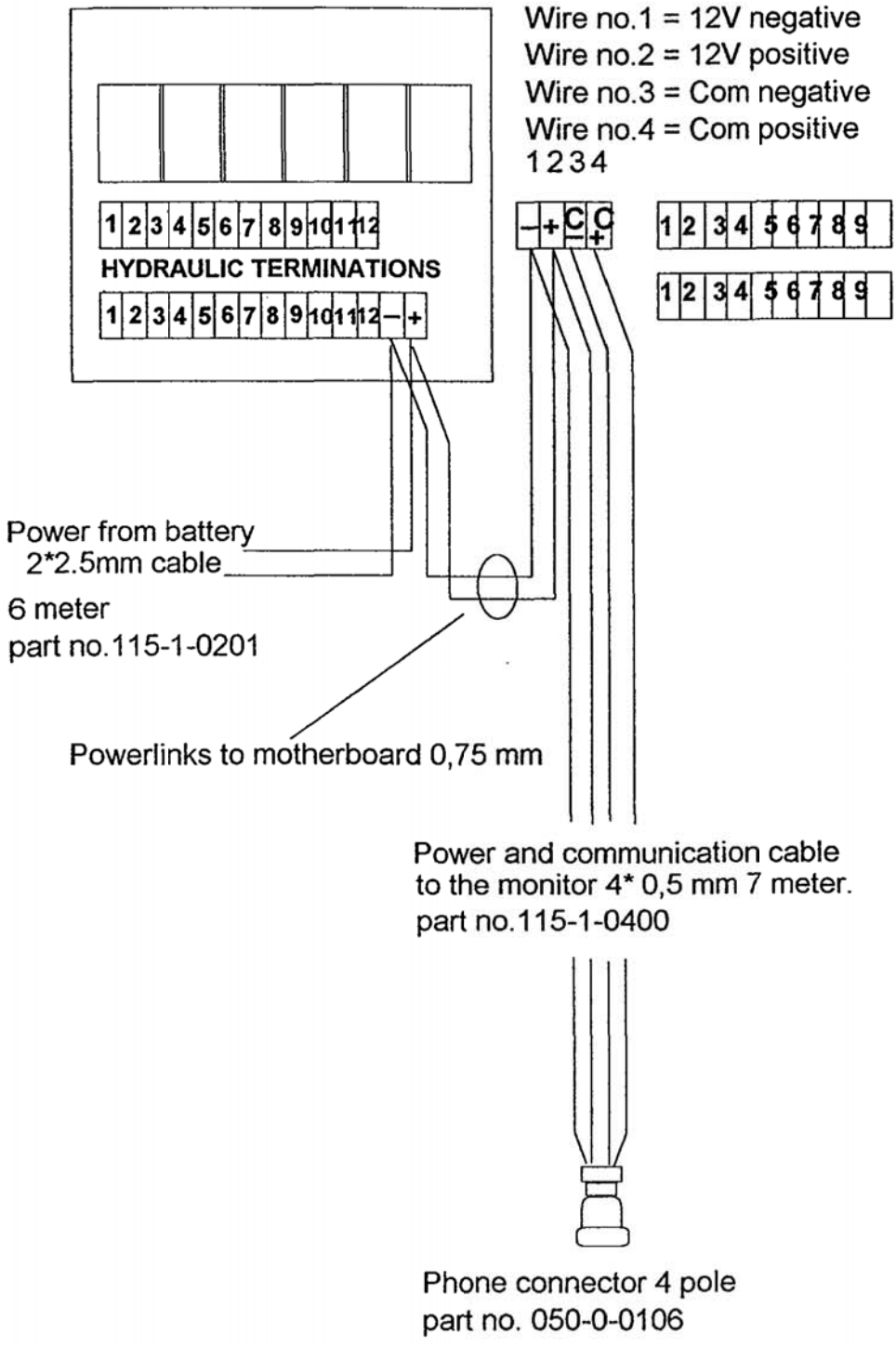
HYDRAULIC OUTPUTS AND TERMINATION.



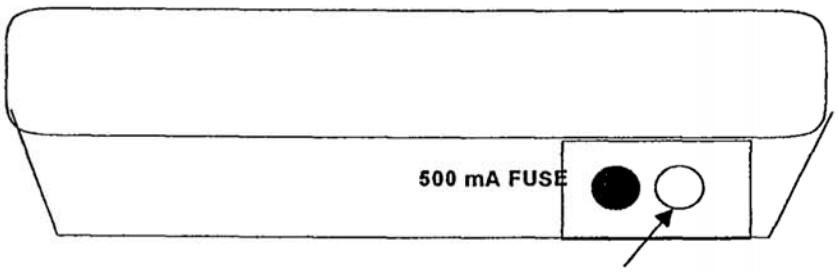
Hydraulic connector

Hydrauick connectorts are to be fitted at Lykketronic.Cable 2*0,75 mm length 60 cm.

POWER AND COMMUNICATION.



The Monitor.



POWER AND COMMUNICATION
BETWEEN CONTROLLERAND MONITOR.

CONNECTOR TERMINALS FOR CONTROLLER 1.

POWER AND COMMUNICATIONTERMINAL 1: NEGATIVE 12 VOLT SUPPLY
2: POSITIVE 12 VOLT SUPPLY.
3: COMMUNICATION NEGATIVE.
4: COMMUNICATION POSITIVE.

NOTE! THE WIRE NUMBERS MUST CORRESPOND TO THE PIN NUMBERS IN THE CONNECTOR ON THE CONTROL PANEL AND THE INDICATED TERMINAL NUMBERS ON THE CONTROLLER POWER AND COMMUNICATION TERMINALS.

GENERAL DISPLAY EXPLANATIONS.

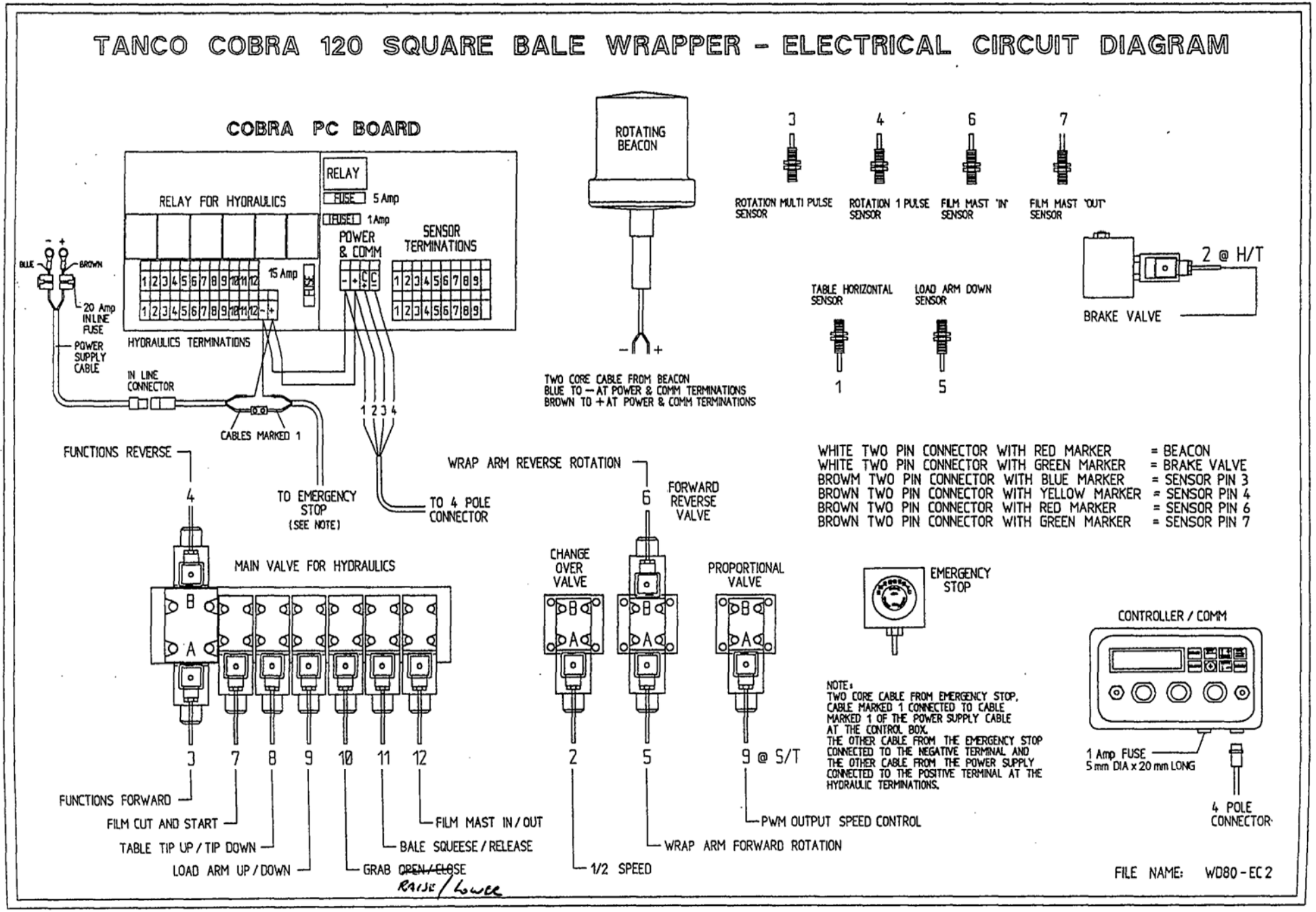
	OPERATOR LEVEL	
	ENGLISH.	ENGLISH
	DISPLAY EXPLANATION.	DISPLAY MESSAGE
	USER SECTION ONLY	
	Programmable user cycle. Counter 3 is the bale counter in use at present.	WRAP CYCLE: 20-21 / BALECOUNTER 3: 345
	To operate the wrap reverse function, this display must be present.	BACKWD. rotation on Rotate-to-position switch
	This operative display shows at all times which function the machine operates at present. This feature enables the operator to monitor the stage the machine is at during a cycle. It is also of great assistance should it be nessecary to determine which relay outputs should be active for a given function	SPEED= 0. ACTIVATED NO FUNCTIONS ACTIVE
	Actual Rpm is the speed at which the wraparm is rotating at present. Max 22 is the maximum speed the system is programmed to achive. The	ACTUAL RPM: 22

	10 to the right of the (max 22) is the operator adjusted speed level which the controller then will maintain	WANTED (MAX.25): 12
	The system contains a total of 10 balecounters which the operator is free to choose from. The individual counters are resetable.	**BALE COUNTERS.** **Press SET to enter.** ***(or press MENU - to advance to next menu , MENU + to previous or EXIT to go operative)***
	Bales total. As below but a resetable function.Machine total displays the total quantity of bales made on the machine in total. This is not a resetable function.	BALES TOTAL: XXXXX MACHINE TOTAL: XXXXX
	Each counter display contains 3 counters.	COUNTER: 1:XXXX 2:XXXX 3:XXXX
	Each counter display contains 3 counters	COUNTER: 4:XXXX 5:XXXX 6:XXXX
	Each counter display contains 3 counters	COUNTER: 7:XXXX 8:XXXX 9:XXXX
	The system is equipped with 2 individual timer tables enabling the machine to operate correctly within 2 value sets of minimum and maximum oil flow levels. Example (H) high level could be a flow level causuing max wrapping speed to be within 25 to 30 rpm and (L) low level a speed of 20 to 25 rpm. I order to make the machine work optimal best matching table should be chosen.	HYDRAULIC FLOW: HIGH (H)
	Enables the operator to choose between auto loading and manual loading of the bale.	AUTO-LOAD BALE : NO
	The operator setup level provides the operator with the possibility to make minor changes to the machine cycle.	**SETUP (COBRA 120)** **PRESS SET TO ENTER.** ***(or press MENU - to advance to next menu , MENU + to previous or EXIT to go operative)***
	USER ACCESABLE SETUP LEVEL	**USER ACCESABLE SETUP LEVEL**
	Entering the user setup level.	!
		HYDRAULIC FLOW : LOW (L)
		AUTO-LOAD BALE:YES

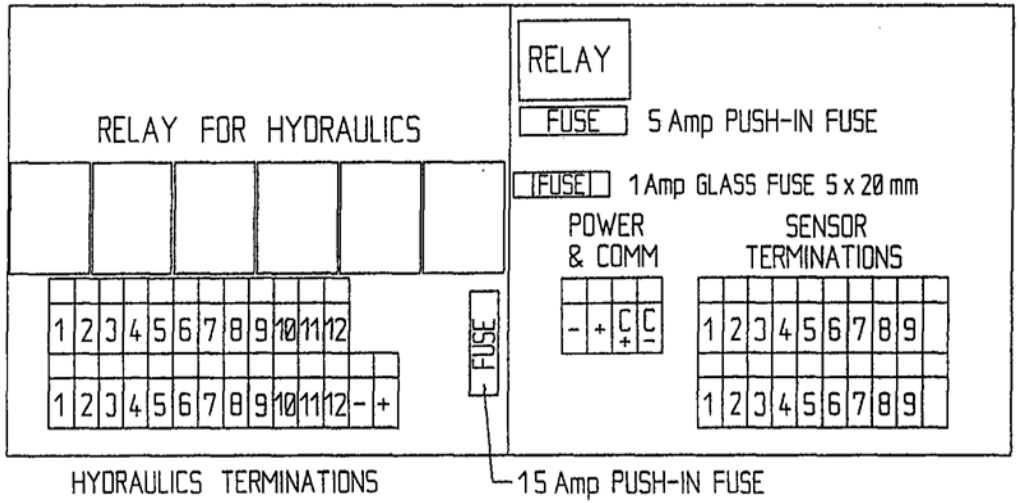
	Entering the sensor setup level.	**SENSOR SETUP.** **PRESS SET TO ENTER.** ***(or press MENU - to advance to next menu , MENU + to previous or EXIT to go operative)***
	In case of defect sensor it may be disengaged enabling continus operation.	TABLE HORIZONTAL SENSOR INSTALLED: YES
	Determines the position where the cutters are to be operated and controles the speed of the machine.	MULTI PULSE ROTATION SENSOR INSTALLED: YES
	Monitors the number of film layers applied to the bale and functions as reference point for the wrapping-arm.	ROTATION SENSOR (1 PULSE/REV) INSTALLED: YES
	The loadarm sensor determines when the table is permitted to return to the horizontal position.	LOADARM ALMOST DOWN SENSOR INSTALLED: YES
	Determines if the mast is in the correct position for the wrap cycle to commence and loadarm to raise above standby position.	FILM-MAST - IN SENSOR INSTALLED: YES.
	Determines if the mast is in the correct position for the wrap cycle to commence and loadarm to raise above standby position.	FILM-MAST - OUT SENSOR INSTALLED: YES.
	HARDWARE TEST. **Press SET to enter.**	**HARDWARE TEST. Press SET to enter.** ***(or press MENU + to return to previous, menu or exit to go operative)***
	Displays the instantaneous battery supply loaded and off load. The last drop is the lowest voltage supply measured during current surge when actiivating the hydraulics.	SUPPLY VOLTAGE:xx.xV LAST DROP: xx.xV
	Entering the sensor / input test facility.	**SENSOR (input) TEST.** **PRESS SET TO ENTER** ***(or press MENU - to advance to next menu , MENU + to previous or EXIT to go operative)***
	Enables the testing of each signal input on the controller and each sensor.	**TESTING SENSORS AND INPUTS**
	A 0 (zero) statement means that the sensor is inactive and a 1 (one) statement that the sensor is active.The sensor number corresponds with the terminal number. (A 0 satus for the	TABLE HORIZ.NO.1:0 INFRA-RED REC.NO.2:0

	infrared reciever, means that it is either not installed, ,omentarily recieving or defect.)	
	A 0 (zero) statement means that the sensor is inactive and a 1 (one) statement that the sensor is active.	ROTATE MULTI,.3:0 ROTATION 1 PULSE.4:0
	A 0 (zero) statement means that the sensor is inactive and a 1 (one) statement that the sensor is active.	LOAD ARM DOWN.5:0 FILM MAST IN.6:0
	A 0 (zero) statement means that the sensor is inactive and a 1 (one) statement that the sensor is active.	FILM MAST OUT. 7:0
	Enables the testing of each push button on the controlpanel.	TEST KEYS PRESSED: XXXX.XXXX
	Enables the testing of each function switch on the control panel.	TEST SWITCHES ACTIVATED:XXXX.XXXX.XXXX.XX
	Enables the testing of each relay output function for the hydraulics on the controller	TEST RELAYS, 0=OFF XXXXXXXXXXXX (12)
	Enables the testing of the entire modulation spectrum of the valve. Ie. to find the point at which the proportional valve provides suffecient oil to an activated function. To access this direct valve control, press the SET button and use the MENU? /- button to increment and or decrement the modulation value.	PWM % (X.XX) : X.XX ACTUAL RPM.
	OPERATOR LEVEL FINISHED.	**OPERATOR LEVEL FINISHED.**

TANCO COBRA 120 SQUARE BALE WRAPPER - ELECTRICAL CIRCUIT DIAGRAM



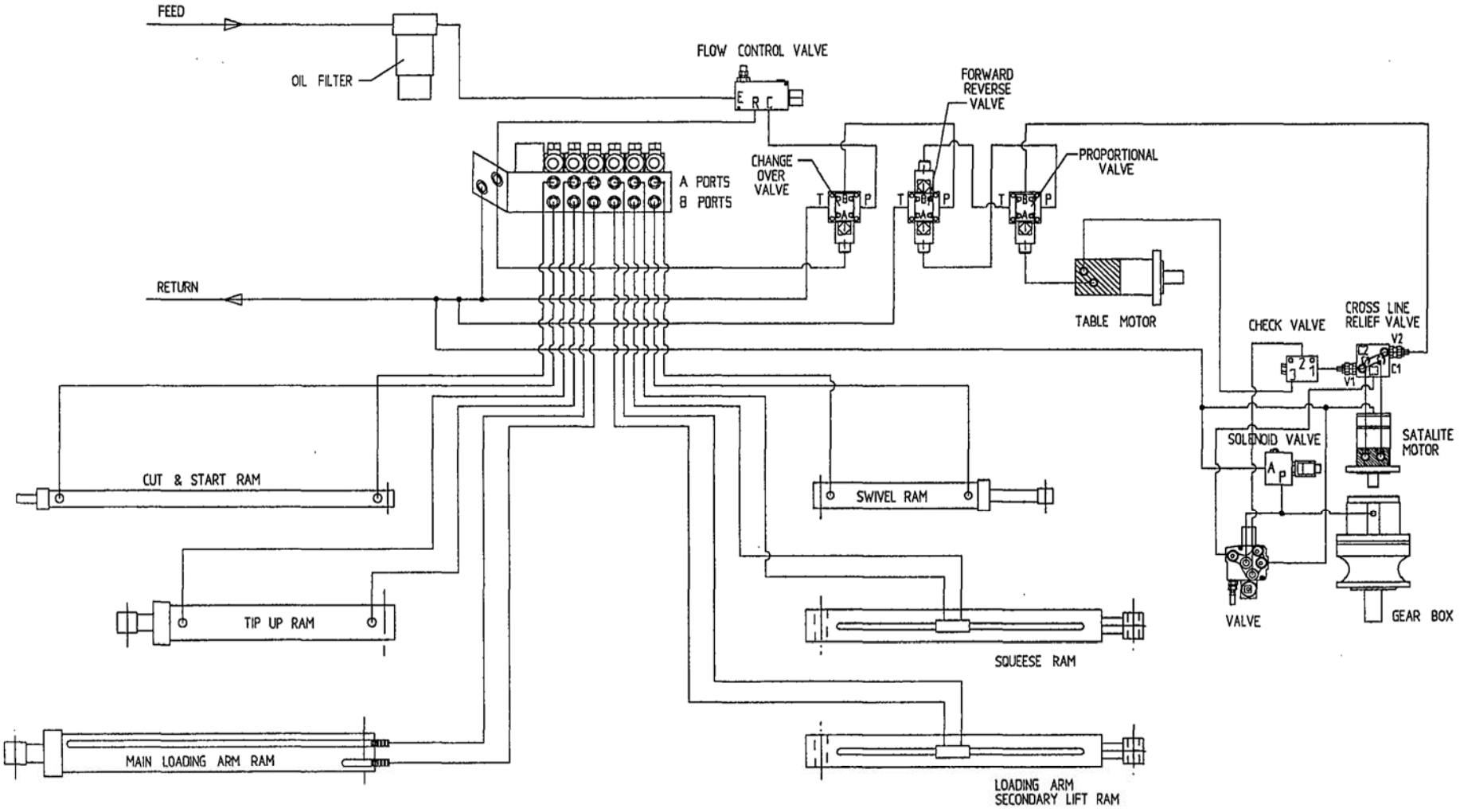
TANCO COBRA 120 SQUARE BALE WRAPPER - ELECTRICAL CIRCUIT DIAGRAM



HYDRAULIC OUTPUTS AND TERMINATION		TERMINAL DESIGNATION SENSORS AND HYDRAULICS
+	12 VOLT POSITIVE	+
-	12 VOLT NEGATIVE	-
12	FILM MAST IN/OUT	C+
11	BALE SQUEESE / RELEASE	C-
10	GRAB OPEN/CLOSE	
9	LOAD ARM UP/DOWN	9 PWM OUTPUT SPEED CONTROL
8	TABLE TIP UP/TIP DOWN	8
7	FILM CUT AND START	7 FILM MAST OUT SENSOR
6	WRAP ARM REVERSE ROTATION	6 FILM MAST IN SENSOR
5	WRAP ARM FORWARD ROTATION	5 LOAD ARM DOWN SENSOR
4	FUNCTIONS REVERSE	4 ROTATION 1 PULSE SENSOR
3	FUNCTIONS FORWARD	3 ROTATION MULTI PULSE SENSOR
2	1/2 SPEED	2 INFRARED RECEIVER
1		1 TABLE HORIZONTAL SENSOR

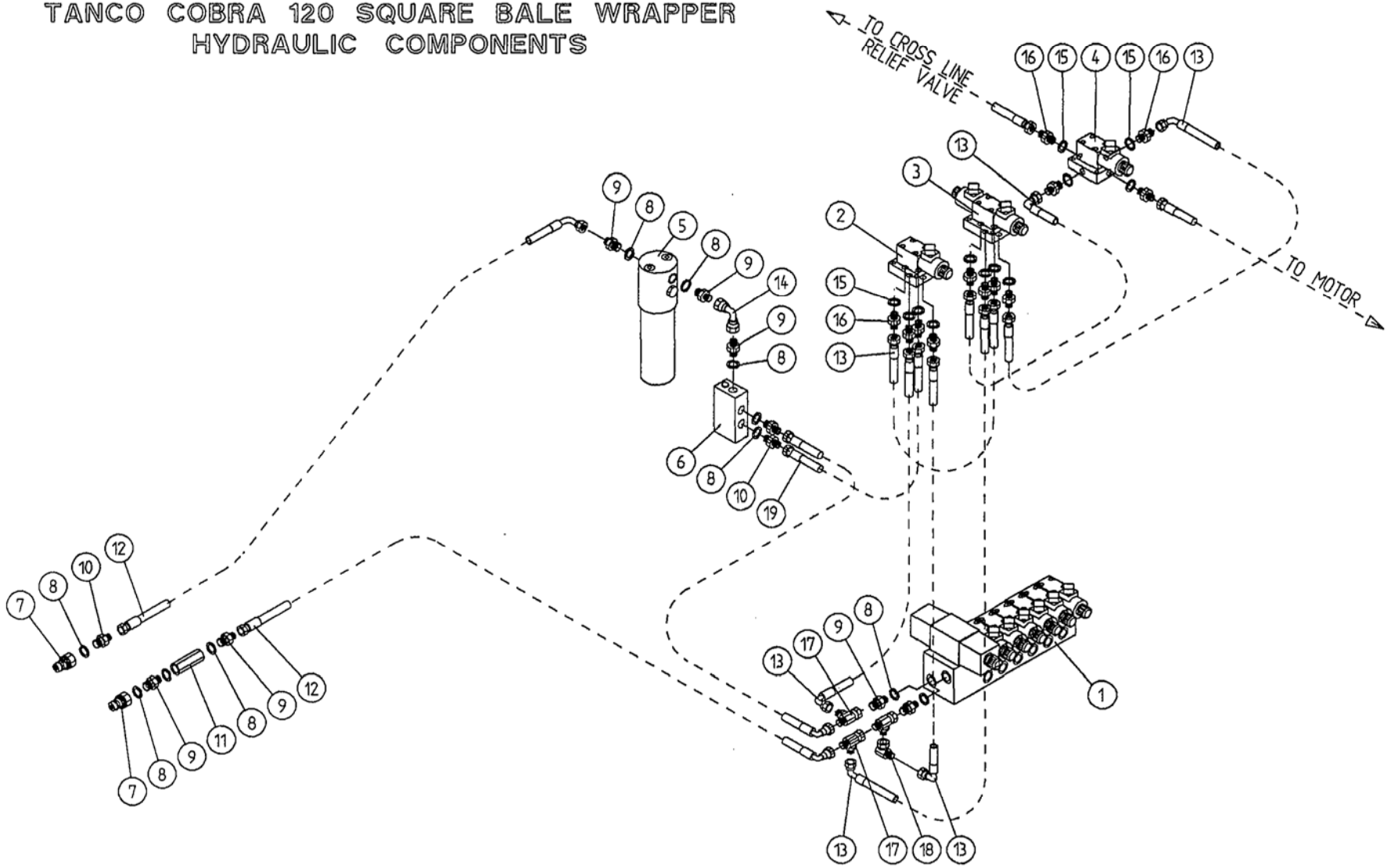
FILE NAME: WD80 - EC 2

TANCO COBRA 120 SQUARE BALE WRAPPER - HYDRAULIC CIRCUIT DIAGRAM



FILE NAME WD80-HC1

TANCO COBRA 120 SQUARE BALE WRAPPER
HYDRAULIC COMPONENTS

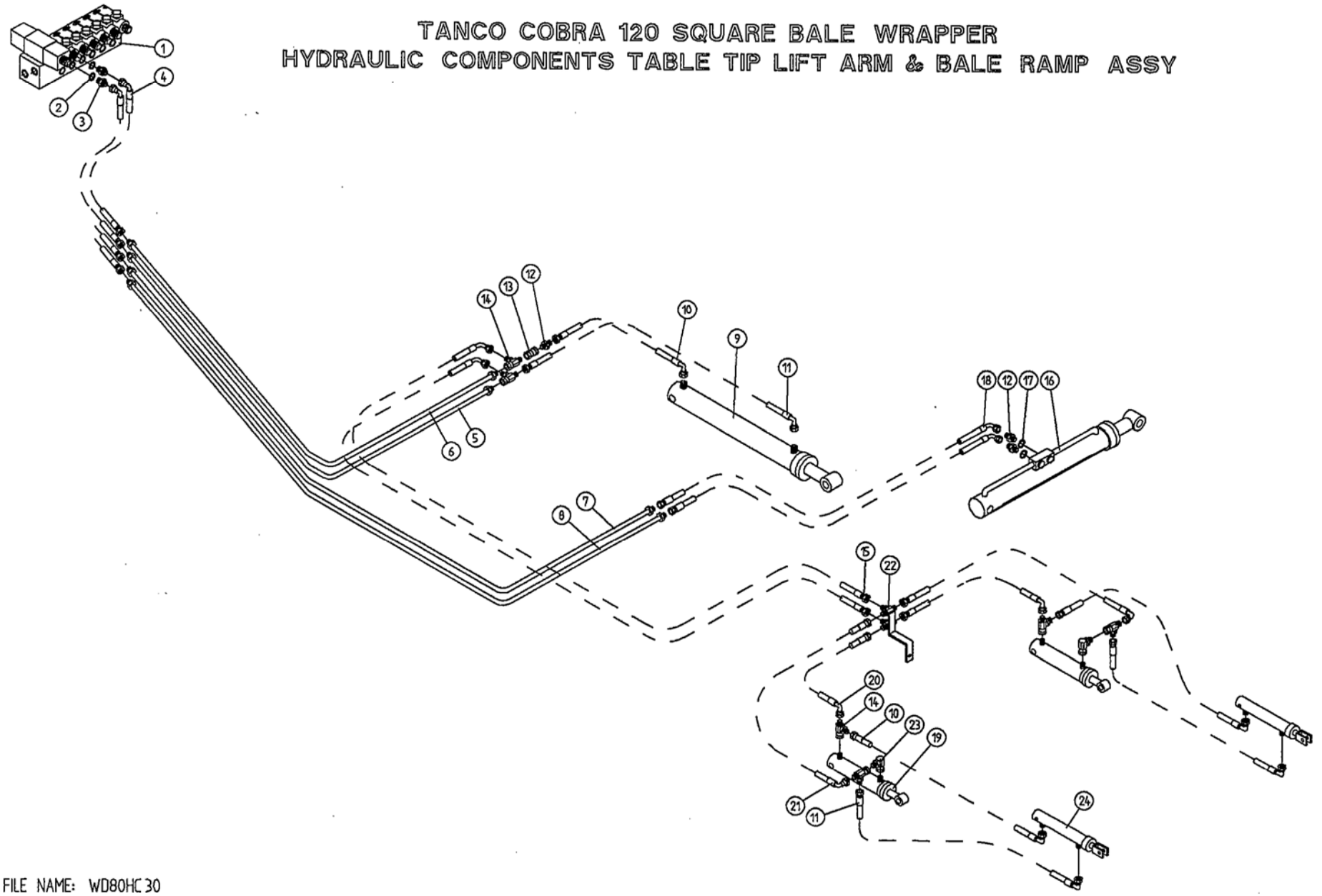


FILE NAME: WD80HC 2

TANCO COBRA 120 SQUARE BALE WRAPPER
HYDRAULIC COMPONENTS VALVE ASSEMBLY

ITEM NO	DESCRIPTION	QTY	PART NO
1	7 STATION VALVE	1	Z01-03-10-C
2	CHANGE OVER VALVE	1	Z01-03-10-C
3	FORWARD REVERSE VALVE	1	Z01-03-10-F
4	PROPORTIONAL VALVE	1	Z01-03-10-P
5	OIL FILTER	1	Z01-24-09
6	FLOW CONTROL VALVE	1	Z01-03-10-F
7	1/2" MALE END Q/R COUPLING	2	Z01-05-018
8	1/2" DOWTY WASHER	11	Z01-04-03
9	1/2" x 1/2" ADAPTOR	7	Z01-06-08-08
10	1/2" x 3/8" ADAPTOR	3	Z01-06-06-08
11	1/2" NON RETURN VALVE	1	Z01-03-017
12	90" ST/90 1/2" D/W HOSE	2	Z12-R2-90-S
13	12" ST/90 3/8" D/W HOSE	6	Z38-R2-12-S
14	1/2" FEMALE x 1/2" FEMALE 90' ELBOW	1	Z01-14-08
15	3/8" DOWTY WASHER	12	Z01-04-02
16	3/8" x 3/8" MALE ADAPTOR	12	Z01-06-06-06
17	1/2" FEMALE x 1/2" MALE x 1/2" MALE "T" PIEC	2	Z01-12-003
18	1/2" MALE FEMALE 90' ELBOW	1	Z01-14-016
19	18" ST/90' 3/8" D/W HOSE	2	Z38-R2-18-S

TANCO COBRA 120 SQUARE BALE WRAPPER
HYDRAULIC COMPONENTS TABLE TIP LIFT ARM & BALE RAMP ASSY



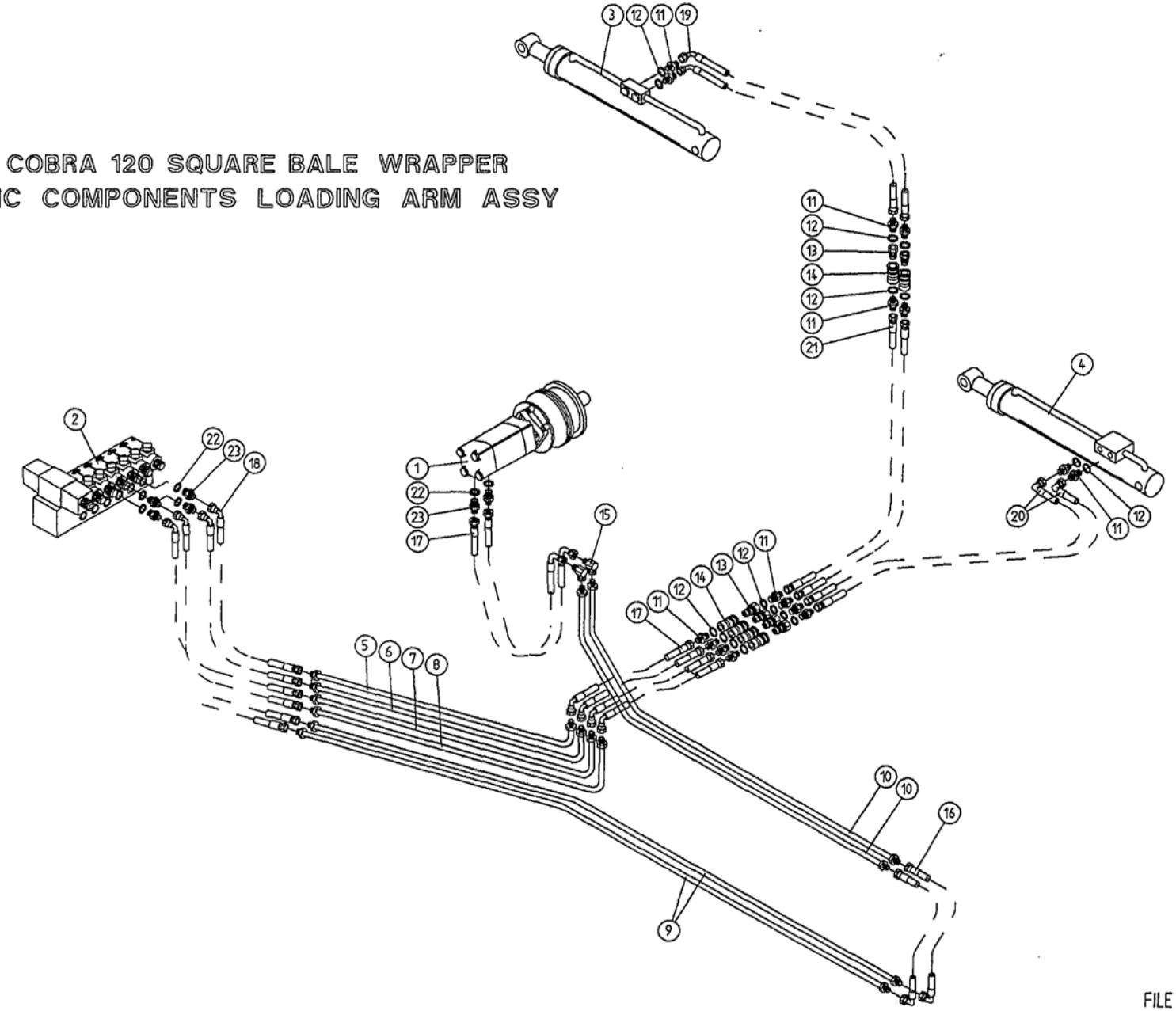
FILE NAME: WD80HC30

WD80HC30

TANCO COBRA 120 SQUARE BALE WRAPPER
HYDRAULIC COMPONENTS
TABLE TIP, LIFT ARM AND BALE RAMP ASSEMBLY

ITEM NO	DESCRIPTION	QTY	PART NO
1	7 STATION VALVE	1	Z01-03-10-C7
2	1/2" DOWTY WASHER	2	Z01-04-03
3	1/2" x 3/8" MALE ADAPTOR	2	Z01-06-06-08
4	30" ST/90' 3/8" D/W HOSE	2	Z12-R2-30-S9
5	TIPPING CYLINDER PIPE TOP	1	WD80-TCPT
6	TIPPING CYLINDER PIPE LOWER	1	WD80-TCPL
7	LIFT ARM CYLINDER CHASSIS PIPE 5	1	WD80-CLAP5
8	LIFT ARM CYLINDER CHASSIS PIPE 6	1	WD80-CLAP6
9	TABLE TIP CYLINDER	1	Z01-01-CR30
10	24" ST/90 3/8" D/W HOSE	3	Z12-R2-24-S9
11	36" ST/90 3/8" D/W HOSE	3	Z12-R2-36-S9
12	3/8" MALE ADAPTOE	3	Z01-06-06-06
13	3/8" FEMALE ADAPTOR	1	Z01-05-F6-F6
14	3/8" FEMALE x 3/8" MALE x 3/8" MALE "T" PIECE	6	Z01-12-002
15	96" ST/90 3/8" D/W HOSE	2	Z12-R2-96-S9
16	LIFT ARM CYLINDER	1	Z01-01-CR40
17	3/8" DOWTY WASHER	2	Z01-04-02
18	12" ST/90 3/8" D/W HOSE	2	Z12-R2-12-S9
19	BALE RAMP CYLINDER	2	Z01-01-AWD
20	60" ST/90 3/8" D/W HOSE	2	Z12-R2-60-S9
21	48" ST/90 3/8" D/W HOSE	2	Z12-R2-48-S9
22	TEE PIECE ASSEMBLY	1	WD80-TPA
23	3/8" MALE x 3/8" FEMALE 90 ELBOW	2	Z01-14-015
24	HYDRAULIUC CYLINDER	2	Z01-01-AW25S

TANCO COBRA 120 SQUARE BALE WRAPPER
HYDRAULIC COMPONENTS LOADING ARM ASSY

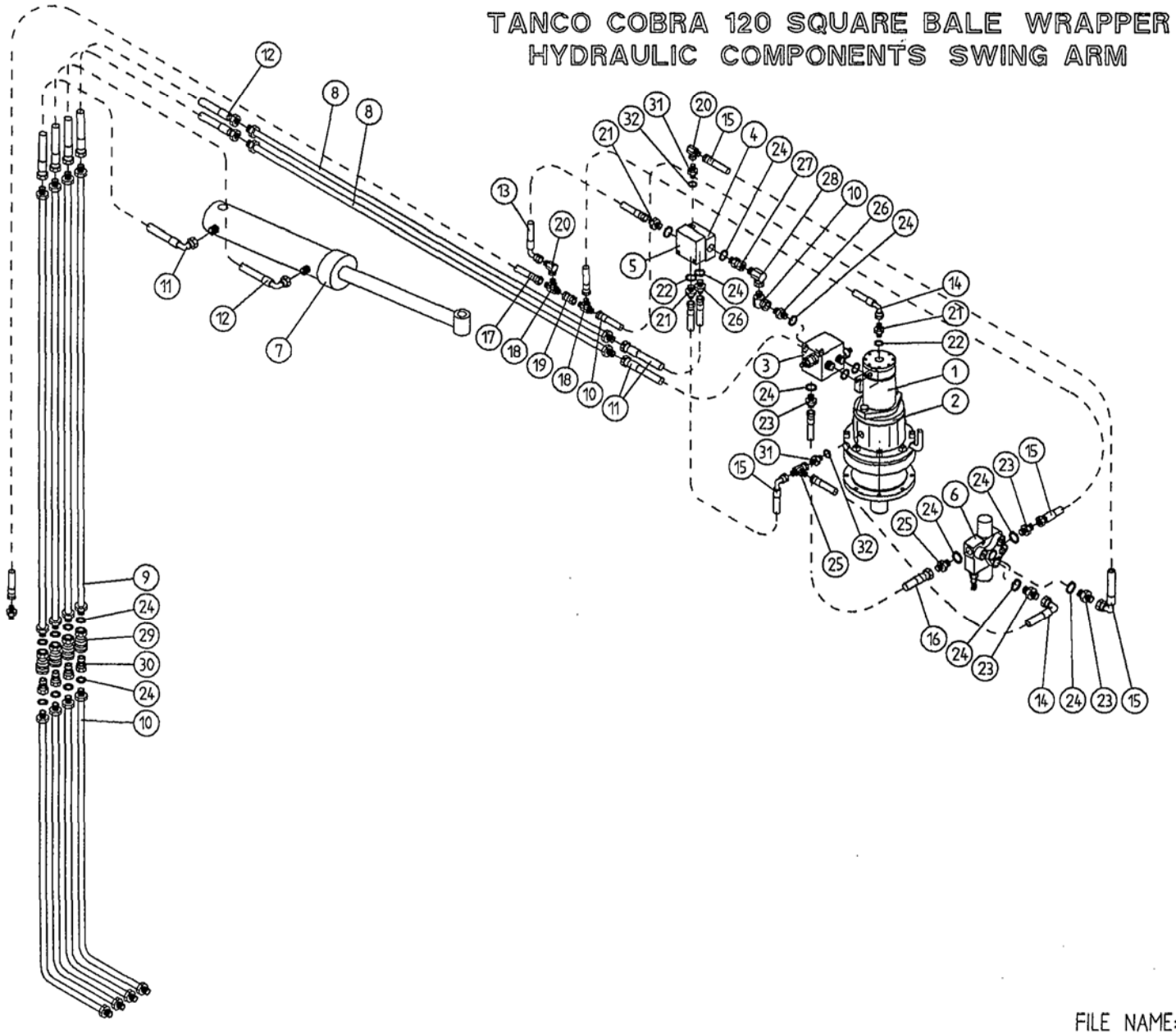


FILE NAME: WD80HC 4

TANCO COBRA 120 SQUARE BALE WRAPPER
HYDRAULIC COMPONENTS LOADING ARM ASSEMBLY

ITEM NO	DISCRIPTION	QTY	PART NO
1	HYDRAULIC MOTOR	1	Z01-03-DOV2K
2	7 STATION VALVE	1	Z01-03-10-C7
3	SQUEEZE RAM	1	Z01-01-T56
4	LOADING ARM SECONDARY LIFT RAM	1	Z01-01-CR20
5	CHASSIS LIFT ARM PIPE 1	1	WD80-CLAP1
6	CHASSIS LIFT ARM PIPE 2	1	WD80-CLAP2
7	CHASSIS LIFT ARM PIPE 3	1	WD80-CLAP3
8	CHASSIS LIFT ARM PIPE 4	1	WD80-CLAP4
9	CHASSIS PIPE TABLE MOTOR	2	WD80-CPTM
10	TABLE PIPES	2	WD80-TP
11	3/8" MALE ADAPTOR	16	Z01-06-06-06
12	3/8" DOWTY WASHER	16	Z01-04-02
13	3/8" MALE END Q/R COUPLING	6	Z01-15-061
14	3/8" FEMALE END Q/R COUPLING	6	Z01-15-062
15	3/8" MAL x 3/8" FEMALE 90' ELBOW	2	Z01-14-015
16	24" ST/90' 3/8" D/W HOSE	2	Z12-R2-12-S9
17	24" ST/90' 3/8" D/W HOSE	6	Z12-R2-24-S9
18	30" ST90' 3/8" D/W HOSE	4	Z12-R2-30-S9
19	60" ST/90' 3/8" D/W HOSE	2	Z12-R2-60-S9
20	84" ST/90' 3/8" D/W HOSE	2	Z12-R2-84-S9
21	120" ST/90' 3/8" D/W HOSE	2	Z12-R2-120-S9
22	1/2" DOWTY WASHER	6	Z01-04-03
23	1/2" x 3/8" MALE ADAPTOR	6	Z01-06-06-08

TANCO COBRA 120 SQUARE BALE WRAPPER
HYDRAULIC COMPONENTS SWING ARM

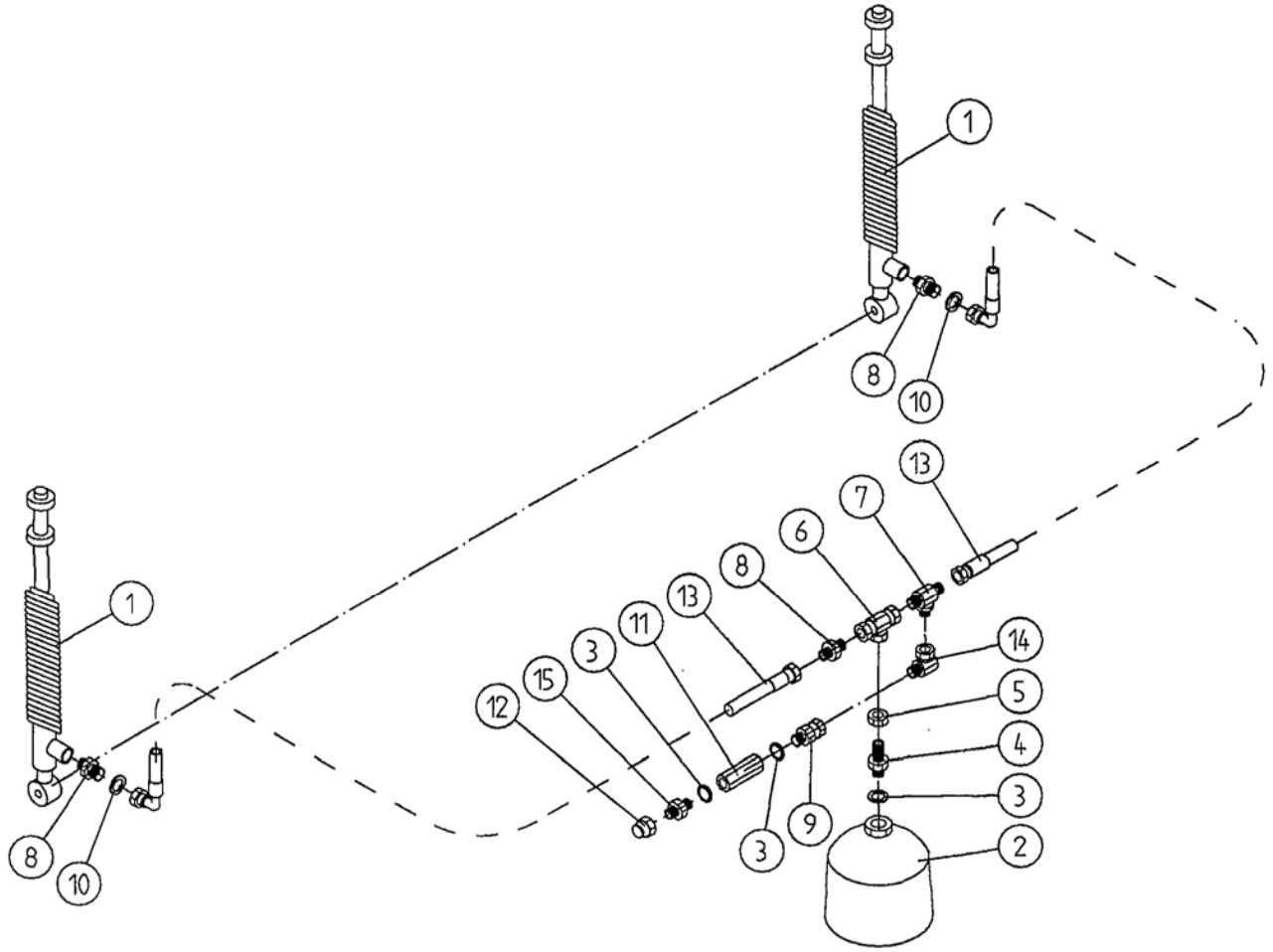


FILE NAME: WD80HC 5

TANCO COBRA 120 SQUARE BALE WRAPPER
HYDRAULIC COMPONENTS SWING ARM ASSEMBLY

ITEM NO	DESCRIPTION	QTY	PART NO
1	HYDRAULIC MOTOR C/W "O" RING	1	Z01-02-M
2	GEARBOX BRAKE C/W BEARING	1	Z01-02-GB
3	CROSS LINE RELIEF VALVE	1	Z01-03-DOV
4	CHECK VALVE	1	Z01-03-CV
5	SOLENOID VALVE	1	Z01-03-D18M
6	VALVE ACTUATOR	1	WD80-VBRC
7	SWING ARM RAM	1	Z01-01-CR10
8	SWING ARM HYD. PIPES	2	WD80-SAP
9	MAST UPRIGHT TOP PIPE	4	WD80-MUTP
10	MAST UPRIGHT LOWER PIPE	4	WD80-MULP
11	12" ST/90' 3/8" D/W HOSE	3	Z38-R2-12-S9
12	24" ST/90' 3/8" D/W HOSE	2	Z38-R2-24-S9
13	12" ST/90' 1/4" D/W HOSE	1	Z14-R2-12-S9
14	20" ST/90' 1/4" D/W HOSE	2	Z14-R2-20-S9
15	24" ST/90' 1/4" D/W HOSE	3	Z14-R2-24-S9
16	18" ST/90' 1/4" D/W HOSE	1	Z14-R2-18-S9
17	108" ST/90' 1/4" D/W HOSE	1	Z14-R2-108-SP
18	1/4" ALL MALE "T" PIECE	2	Z01-11-001
19	1/4" x 1/4" FEMALE/FEMALE ADAPTOR	1	Z01-05-F4-F4
20	1/4" M/F 90' ELBOW	2	Z01-14-013
21	1/4" MALE ADAPTOR	4	Z01-06-04-04
22	1/4" DOWTY WASHER	4	Z01-04-01
23	3/8" MALE x 1/4" MALE ADAPTOR	5	Z01-06-04-06
24	3/8" DOWTY WASHER	18	Z01-04-02
25	1/4" MALE x 1/4" MALE x 1/4" FEMALE "T" PI	2	Z01-12-001
26	3/8" MALE x 3/8" MALE ADAPTOR	2	Z01-06-06-06
27	3/8" MALE x 3/8" FEMALE ADAPTOR	1	Z01-05-06-06
28	3/8" MALE x 3/8" FEMALE 90' ELBOW	1	Z01-14-015
29	3/8" FEMALE Q/R COUPLING	4	Z01-15-082
30	3/8" MALE Q/R COUPLING	4	Z01-15-084
31	1/4" x 1/8" ADAPTOR	2	Z01-06-04-06
32	1/4" DOWTY WASHER	2	Z01-04-01

TANCO COBRA 120 SQUARE BALE WRAPPER
HYDRAULIC COMPONENTS LARGE ACCUMULATOR

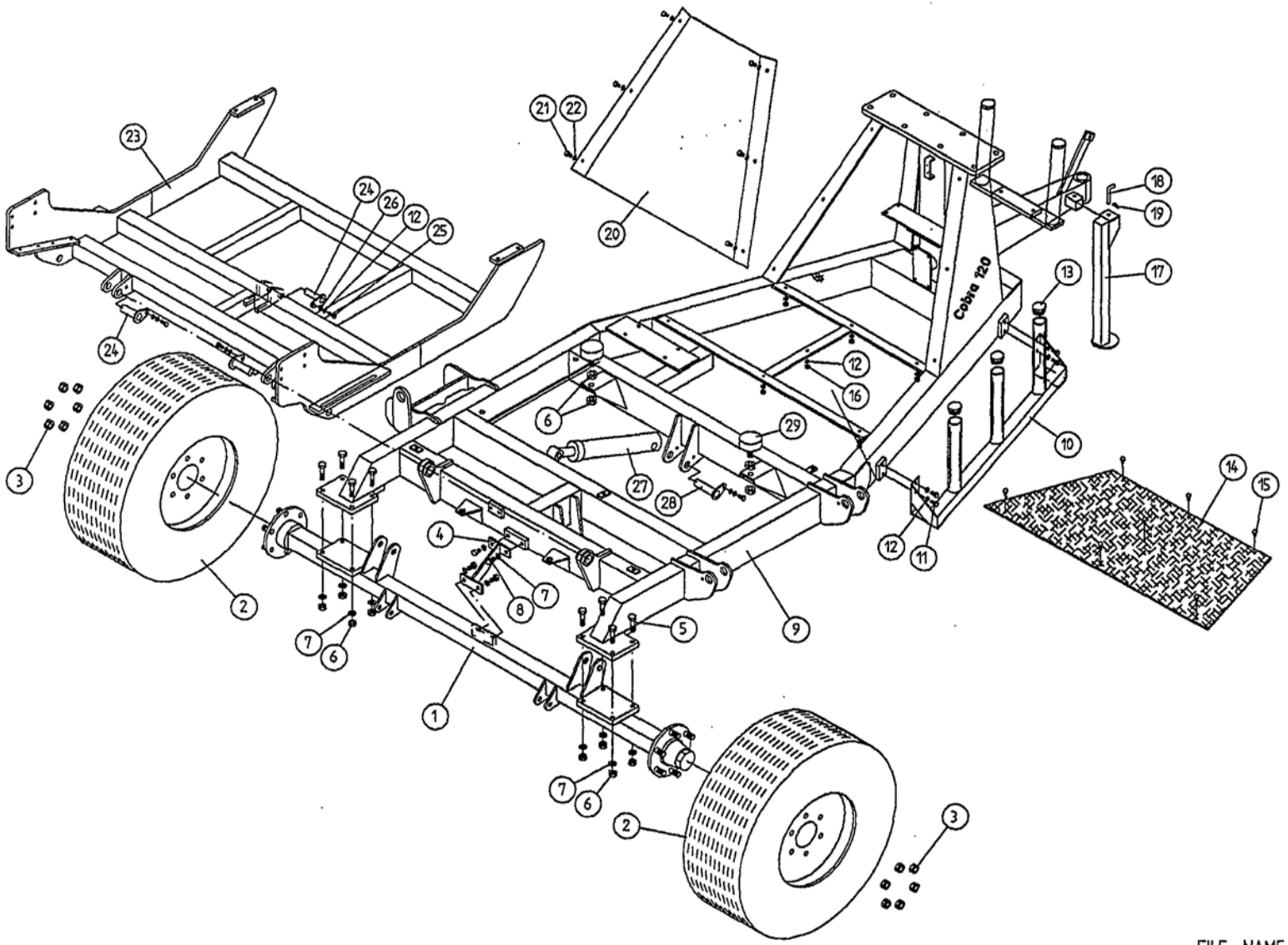


FILE NAME: WD80HC 6

TANCO COBRA 120 SQUARE BALE WRAPPER
HYDRAULIC COMPONENTS LARGE ACCUMULATOR

ITEM NO	DESCRIPTION	QTY	PART NO
1	COBRA CYLINDER EX GATE VALVE	2	Z01-01-CR60
2	LARGE ACCUMULATOR	1	Z01-29-01
3	1/2" DOWTY WASHER	3	Z01-04-03
4	1/2" x 3/8" BULK HEAD ADAPTOR C/W HEX N	1	Z01-06-05
5	3/8" FEMALE "T" PIECE	1	Z01-12-0021
6	3/8" MALE "T" PIECE	1	Z01-11-002
7	3/8" ADAPTOR	3	Z01-06-06-06
8	1/2" MALE x 3/8" FEMALE ADAPTOR	1	Z01-05-06-06
9	3/8" DOWTY WASHER	2	Z01-04-02
10	1/2" NON RETURN VALVE	1	Z01-03-017
11	3/8" FEMALE BLANK	1	Z01-06-FB06
12	72" ST/90' 3/8" D/W HOSE	2	Z38-R2-72-S9
13	3/8" MALE x 3/8" FEMALE 90' ELBOW	1	Z01-14-015
14	1/2" MALE x 3/8" MALE ADAPTOR	1	Z01-05-06-08

TANCO COBRA 120 SQUARE BALE WRAPPER
CHASSIS AND TIPPING FRAME ASSEMBLY

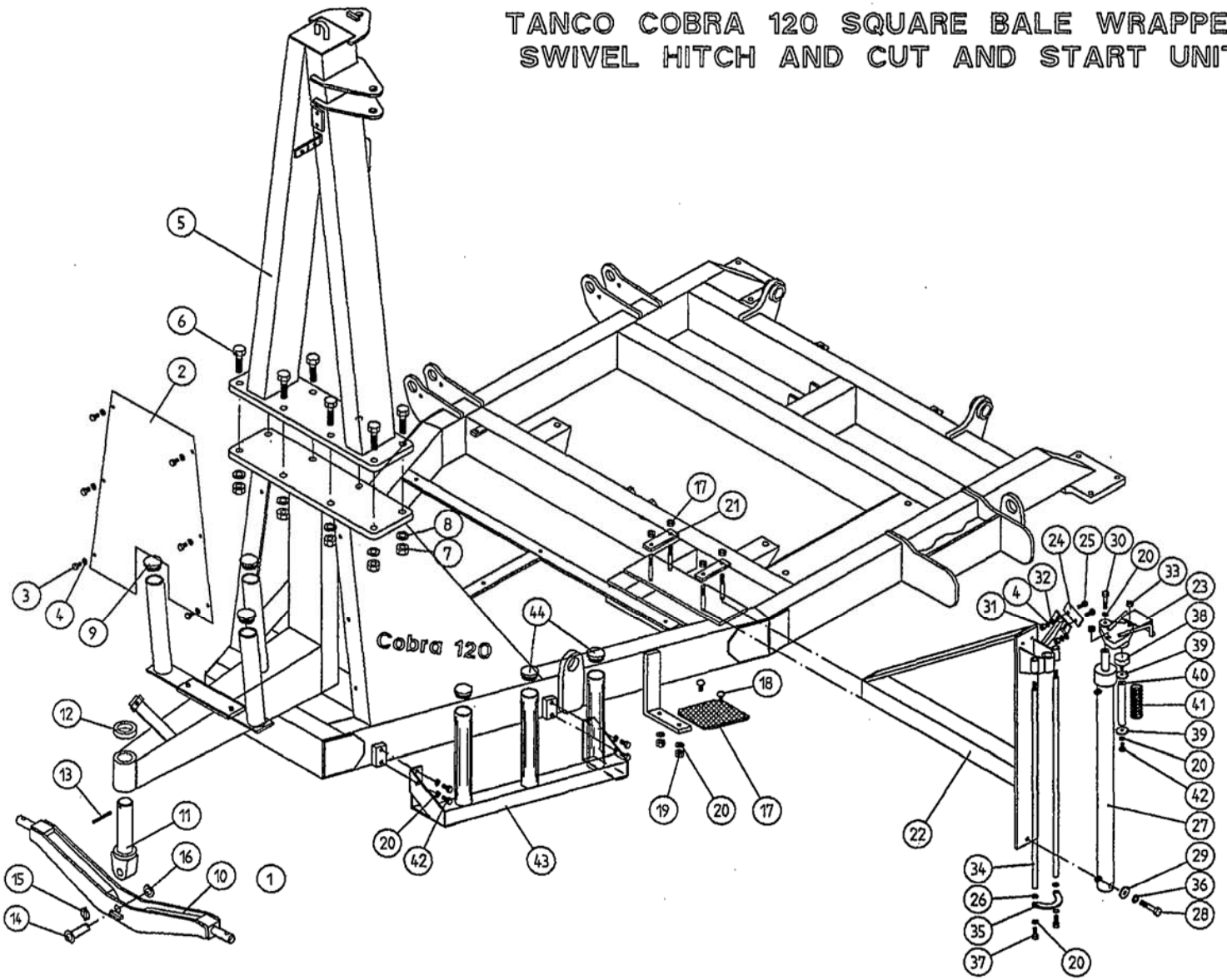


FILE NAME: WD80PL15

TANCO COBRA 120 SQUARE BALE WRAPPER
CHASSIS AND TIPPING FRAME ASSEMBLY

ITEM NO	DESCRIPTION	QTY	PART NO
1	AXLE ASSEMBLY	1	WD80-AA
2	15/55-17 12 PLY WHEELS	2	Z04-045
3	WHEEL NUTS	12	M22AWNA
4	AXLE SUPPORT BRACKET	1	WD80-ASB
5	M16 x 70mm BOLTS	8	Z26-258B
6	M16 HEX NUTS	12	Z18-16
7	16mm DIA SPRING WASHER	12	Z12-02-16
8	M16 x 35mm SETS	4	Z26-121S
9	CHASSIS ASSY	1	WD80-CHA
10	FILM TRANSPORT BRACKET	1	WD80-FTB1
11	M10 x 25mm SETS	4	Z26-0611S
12	10mm DIA SPRING WASHER	11	Z12-02-10
13	PLASTIC CAP 2"	3	Z32-08
14	CHASSIS COVER PLATE	1	WD80-343
15	M10 x 30mm COACH BOLTS	7	Z13-112
16	M10 HEX NUTS	7	Z18-10
17	PARKING STAND	1	WD80-PS
18	80mm BISSE PIN	1	WD60-861
19	4mm "R" CLIP	1	Z36-02-06
20	VALVE HOUSING REAR COVER PLATE	1	WD80-320
21	M8 x 16mm SETS	6	Z26-038S
22	8mm DIA SPRING WASHER	6	Z12-02-08
23	TIPPING FRAME ASSY	1	WD80-TA
24	TIPPING FRAME PIVOT & RAM TOP PIVOT PIN C/W GREASE NIPPLE	3	Z03-11-010
25	M10 x 20mm SETS	4	Z26-060S
26	10mm DIA FLAT WASHER	3	Z10-02-10
27	HYDRAULIC RAM	1	Z01-01-CR30
28	RAM BOTTOM PIVOT PIN C/W GREASE NIPPLE	1	Z03-11-030
29	100mm DIA BUFFER x 40mm	2	Z40-26

TANCO COBRA 120 SQUARE BALE WRAPPER
SWIVEL HITCH AND CUT AND START UNIT

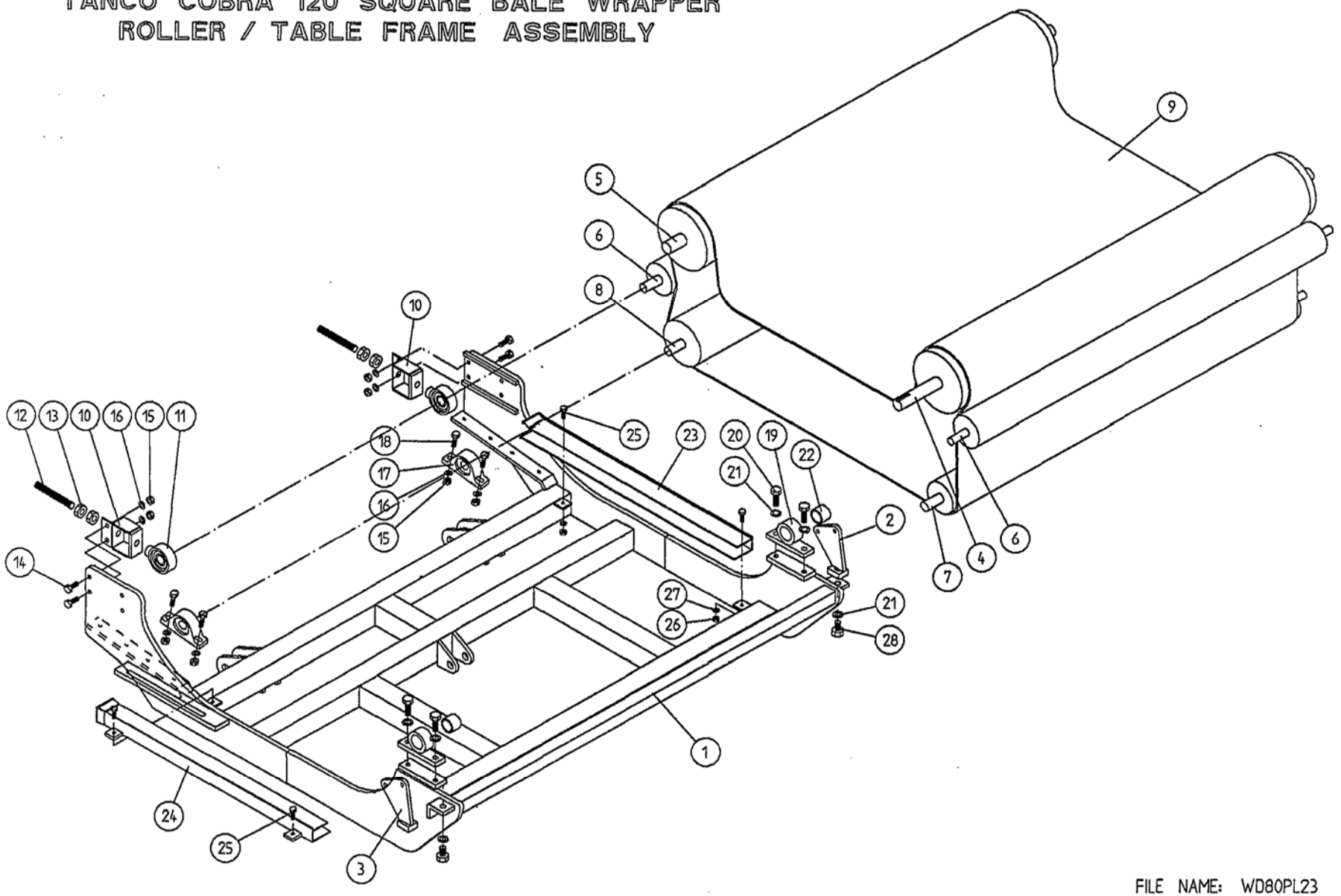


FILE NAME: WD80PL16

TANCO COBRA 120 SQUARE BALE WRAPPER
SWIVEL HITCH AND CUT AND START UNIT

ITEM NO	DESCRIPTION	QTY	PART NO
1	CHASSIS ASSEMBLY	1	WD80-CHA
2	VALVE HOUSING FRONT COVER PLATE	1	WD80-321
3	M8 x 16mm SETS	6	Z26-028S
4	8mm DIA SPRING WASHER	8	Z12-02-08
5	MAST UPRIGHT ASSY	1	WD80-MUA
6	M20 x 70mm BOLTS	8	Z26-167B
7	M20 HEX NUTS	8	Z18-20
8	20mm DIA SPRING WASHER	8	Z12-20-20
9	PLASTIC CAP 2"	3	Z32-08
10	SWIVEL HITCH ASSY	1	WD80-SHA
11	SWIVEL HITCH PIN ASSY	1	WD80-SHP
12	RETAINING COLLAR	1	WD80-182
13	8mm DIA x 70mm TENSION PIN	1	Z03-20-023
14	SWIVEL HITCH PIVOT PIN	1	Z03-03-50
15	1/4" LINCH PIN	1	Z03-22-03
16	1" DIA LIGHT FLAT WASHER	1	Z11-02-25
17	STEP	1	WD80-342
18	M10 x 40mm COACH BOLTS	2	Z13-115
19	M10 HEX NUTS	2	Z18-10
20	10mm DIA SPRING WASHER	11	Z12-02-10
21	CLAMPING PLATE	2	WD80-036
22	CUT AND START FRAME	1	WD80-CSF
23	CUT AND START GRIPPER	1	WD80-CSG
24	BLADE	1	WD605-104
25	M8 x 25mm H/T HEX SET - DW 933	2	Z26-040S
26	12mm DIA STAR WASHER	2	Z12-01-121
27	HYDRAULIC CYLINDER	1	Z01-01-CR50
28	M12 x 65mm BOLT	1	Z26-0882B
29	1" FLAT WASHER H.D.	1	Z01-02-25
30	M10 x 30mm SET	1	Z26-062S
31	M8 HEX NUT	2	Z18-08
32	8mm DIA FLAT WASHER	2	Z11-02-081
33	M12 LOCKNUT	2	Z23-12
34	GUIDE RODS	2	WD80-257
35	GUIDE ROD CONNECTOR PLATE	1	WD80-256
36	12mm DIA SPRING WASHER	1	Z12-02-12
37	M10 x 40mm SETS	2	Z26-060S
38	BUFFER	1	Z40-28
39	COLLAR	2	WD623-071
40	GRIPPER ROD	1	WD605H-13
41	SPRING	1	Z07-03
42	M10 x 25mm SET	5	Z26-0611S
43	FILM TRANSPORT BRACKET	1	WD80-FTB1
44	PLASTIC CAP	3	Z32-08

TANCO COBRA 120 SQUARE BALE WRAPPER
ROLLER / TABLE FRAME ASSEMBLY



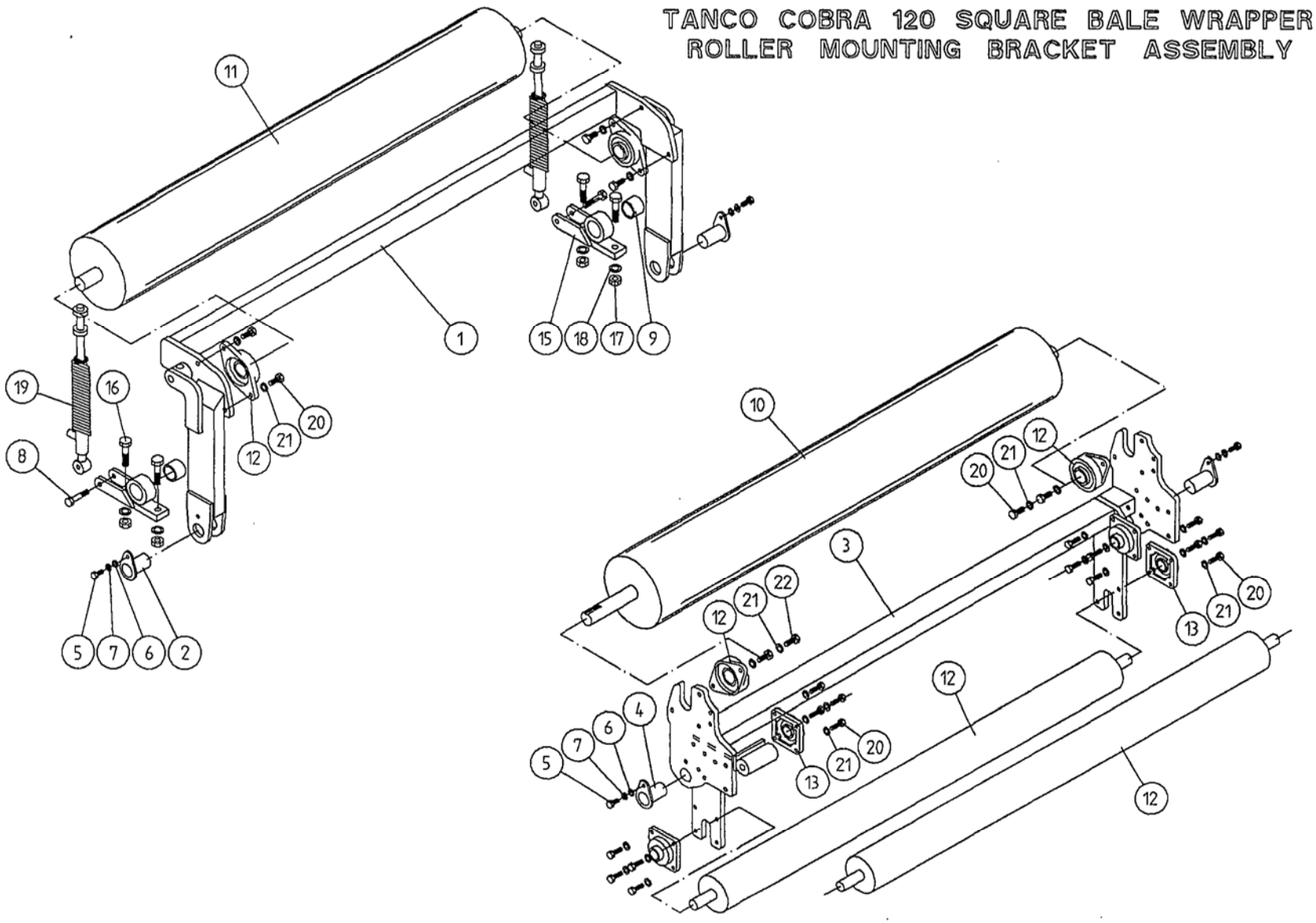
FILE NAME: WD80PL23

WD80PL23

TANCO COBRA 120 SQUARE BALE WRAPPER
ROLLER / TABLE FRAME ASSEMBLY

ITEM NO	DESCRIPTION	QTY	PART NO
1	TABLE ASSEMBLY	1	WD80-TA
2	FRONT ROLLER MOUNTING SUPPORT R.H.S.	1	WD80-FRMS1
3	FRONT ROLLER MOUNTING SUPPORT L.H.S.	1	WD80-FRMS2
4	11" DRIVE ROLLER	1	WD80-DR
5	11" IDLER ROLLER	1	WD80-IR
6	4" TRACKING ROLLER	2	WD80-TR
7	4" IDLER ROLLER	1	WD80-SRI
8	6" IDLER ROLLER	1	WD80-MRI
9	BALE BELT 1485mm WIDE x 4470mm LONG	1	Z05-02-C1
10	TRACKING ROLLER MOUNTING BRACKET	2	WD80-TRMC
11	30mm HANGER BEARING	2	Z06-AW-SCH3
12	M20 THREADED BAR x 160mm LONG	2	WD80-TB160
13	M20 HEX NUT	4	Z18-20
14	M12 x 35 SETS	4	Z26-083S
15	M12 HEX NUTS	8	Z18-12
16	12mm DIA SPRING WASHER	8	Z12-02-12
17	30mm PILLOW BLOCK BEARING	2	Z06-AW-NP30
18	M12 x 45mm SETS	4	Z06-085S
19	PIVOT BOSS ASSY FRONT	2	WD80-PBF
20	M16 x 40mm SETS	4	Z26-122S
21	16mm DIA SPRING WASHER	6	Z12-02-16
22	TENSION BUSH	2	Z03-20-12
23	BELT GUIDE ASSY	1	WD80-BG1
24	BELT GUIDE ASSY	1	WD80-BG2
25	M8 x 30mm SETS	4	Z26-041S
26	M8 HEX NUTS	4	Z18-08
27	8mm DIA SPRING WASHER	4	Z12-02-08
28	M16 x 25mm SET	2	Z26-119S

TANCO COBRA 120 SQUARE BALE WRAPPER
ROLLER MOUNTING BRACKET ASSEMBLY

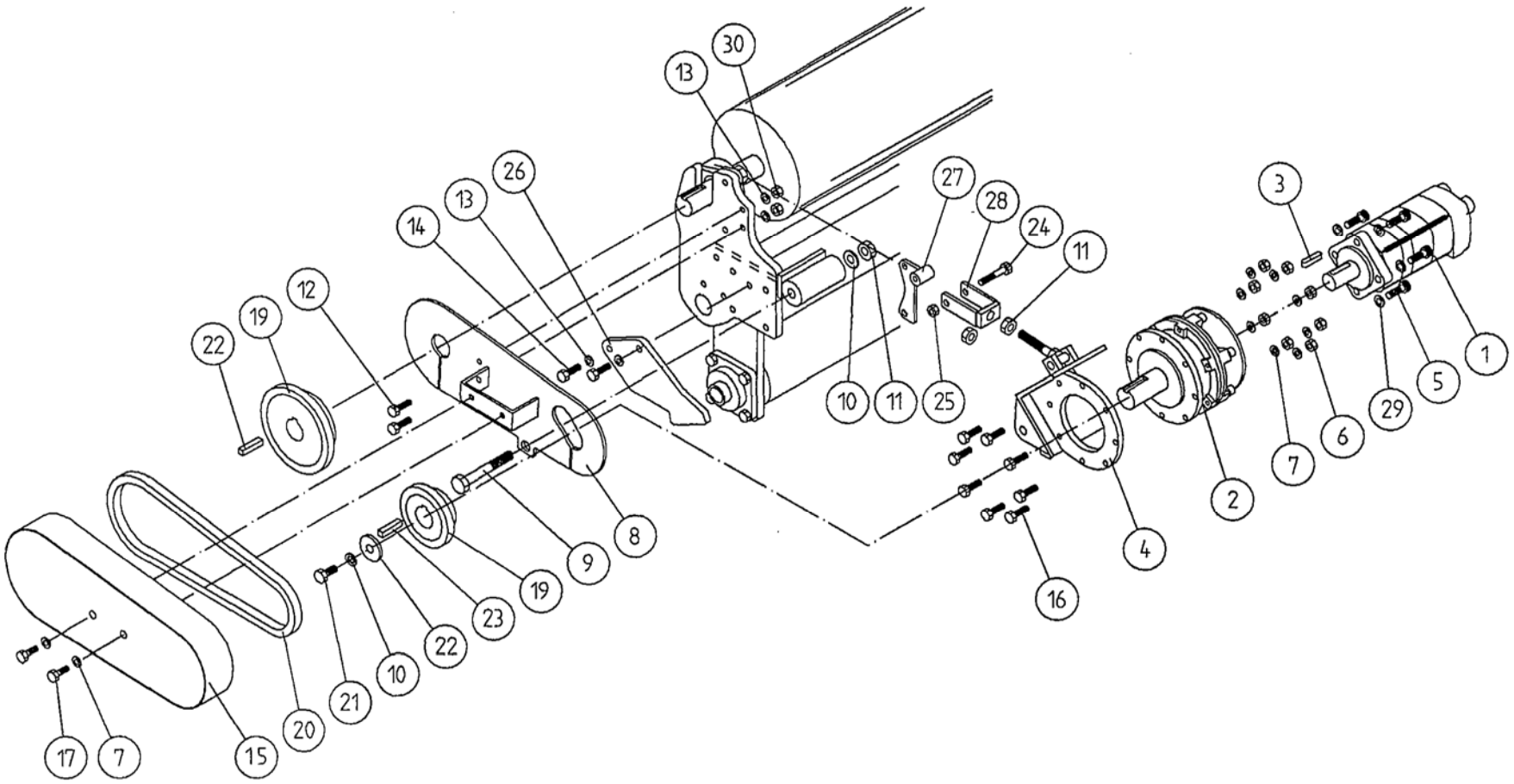


FILE NAME: WD80PL12

TANCO COBRA 120 SQUARE BALE WRAPPER
ROLLER MOUNTING BRACKET ASSEMBLY

ITEM NO	DESCRIPTION	QTY	PART NO
1	ROLLER MOUNTING BRACKET REAR	1	WD80-RMBR
2	ROLLER MOUNTING BRACKET PIVOT PIN	2	WD80-03-065
3	ROLLER MOUNTING BRACKET FRONT	1	WD80-RMBF
4	FRONT MOUNTING BRACKET PIVOT PIN	2	Z26-060S
5	M10 x 25mm SETS	4	Z10-02-10
6	10mm DIA FLAT WASHER	4	Z12-02-10
7	10mm DIA SPRING WASHER	4	Z26-0671B
8	M10 x 65mm BOLTS	2	Z03-20-12
9	TENSION BUSH	4	WD80-BRD
10	11" DRIVE ROLLER	1	WD80-BRI
11	11" IDLER ROLLER	1	Z06-AW-SF40
12	40mm (2 HOLE) FLANGE BEARING	4	Z06-AW-SF30
13	30mm (4 HOLE) FLANGE BEARING	4	WD80-PBRL
14	PIVOT BOSS ASSY REAR L.H.S.	1	WD80-PBRR
15	PIVOT BOSS ASSY REAR R.H.S.	1	Z26-128B
16	M16 x 70mm BOLTS	4	Z18-16
17	M16 HEX NUT	4	Z12-02-16
18	16mm DIA SPRING WASHER	4	Z12-02-16
19	DAMPER RAM	2	Z01-01-CR60
20	M12 x 30 SETS	23	Z26-082S
21	12mm DIA SPRING WASHER	24	Z12-02-12
22	M12 x 40mm SETS	1	Z26-084S

TANCO COBRA 120 SQUARE BALE WRAPPER
DRIVE ROLLER CHAIN DRIVE ASSEMBLY

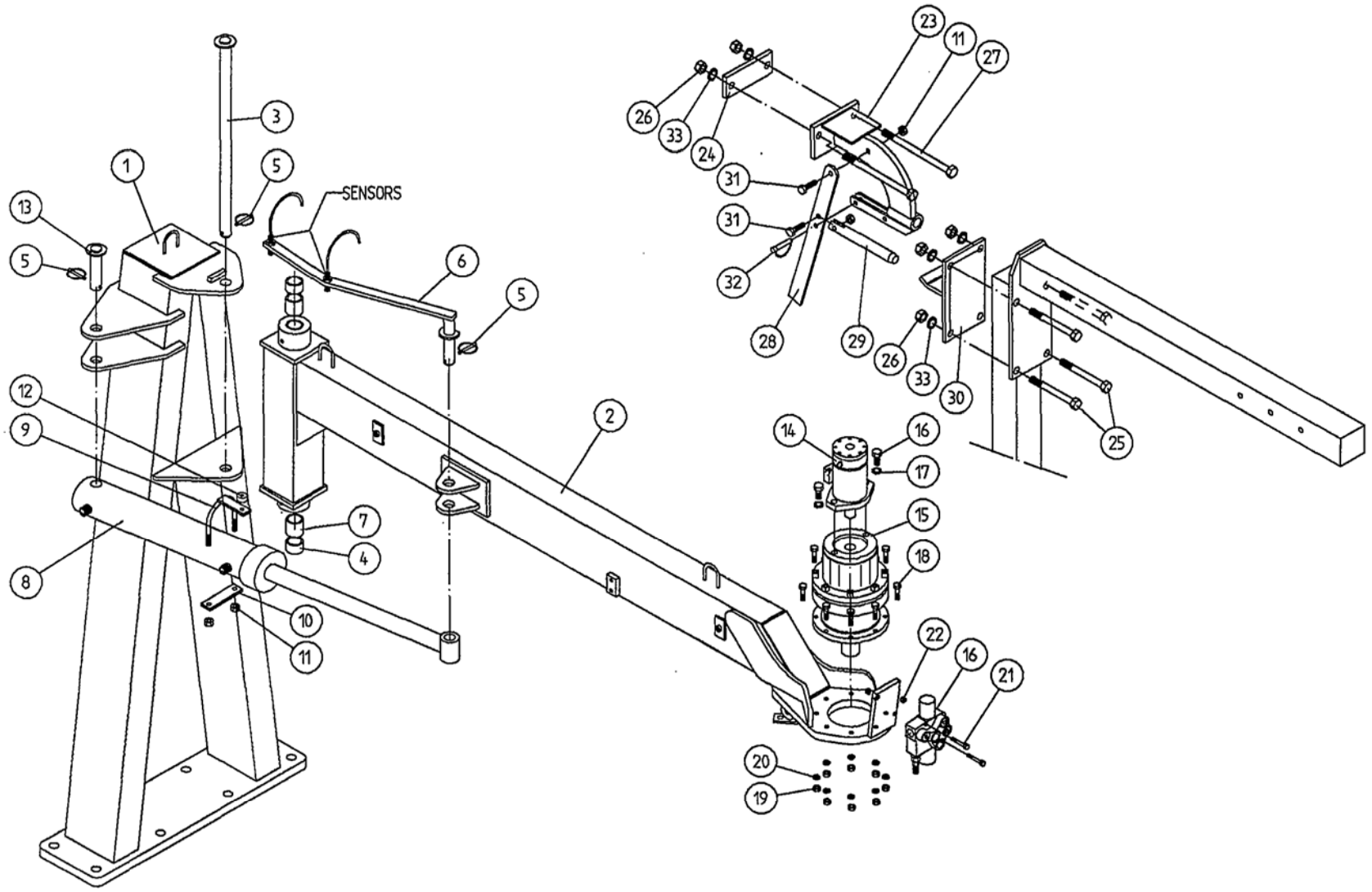


FILE NAME: WD80PL14

TANCO COBRA 120 SQUARE BALE WRAPPER
DRIVE ROLLER CHAIN DRIVE ASSEMBLY

ITEM NO	DESCRIPTION	QTY	PART NO
1	HYDRAULIC MOTOR	1	Z01-03-DOV2
2	GEARBOX FOR 2K MOTOR	1	Z01-02-TG
3	10 x 12 KET STEEL 40mm LONG	1	WD80-KS40
4	HYDRAULIC MOTOR MOUNTING BRACKET	1	WD80-HMG
5	M10 x 35mm SOCKET HD. SET SCREW	4	Z13-6-10-35
6	M8 HEX NUT	8	Z18-08
7	8mm DIA SPRING WASHER	10	Z12-02-08
8	CHAIN GUARD BACKING PLATE ASSY	1	WD80-CGBP
9	M16 x 150mm BOLTS	1	Z26-1355B
10	16mm DIA SPRING WASHER	2	Z12-02-16
11	M16 HEX NUT	3	Z18-16
12	M10 x 30mm SETS	2	Z26-062S
13	12mm DIA SPRING WASHER	4	Z12-02-12
13	M12 x 35mm SETS	2	Z26-083S
15	CHAIN GUARD	1	WD80-CG
16	M8 x 35mm SETS	8	Z26-042S
17	M8 x 80mm SETS	2	Z26-041S
18	19 TOOTH SPROCKET	1	Z06-C9
19	13 TOOTH SPROCKET	1	Z06-C13
20	CHAIN 1" PITCH x 54 PITCHES	1	Z09-AW6
21	M16 x 40mm SETS	1	Z26-122S
22	LOCKING COLLAR	1	WD623-071
23	10 x 12 KEY STEEL x 65mm LONG	1	WD80-KS65
24	M10 x 65mm BOLTS	1	Z26-0671B
25	M10 LOCKNUT	1	Z23-10
26	FRONT ROLLER MOUNTING SUPPORT PLAT	1	WD80-073
27	HYDRAULIC MOTOR ADJUSTER MOUNTING	1	WD80-HMAM
28	HYDRAULIC MOTOR ADJUSTER BRACKET	1	WD80-HMAB
29	10mm DIA SPRING WASHER	4	Z12-02-10
30	M10 HEX NUT	2	Z18-10

TANCO COBRA 120 SQUARE BALE WRAPPER
A-FRAME AND SWING ARM ASSEMBLY



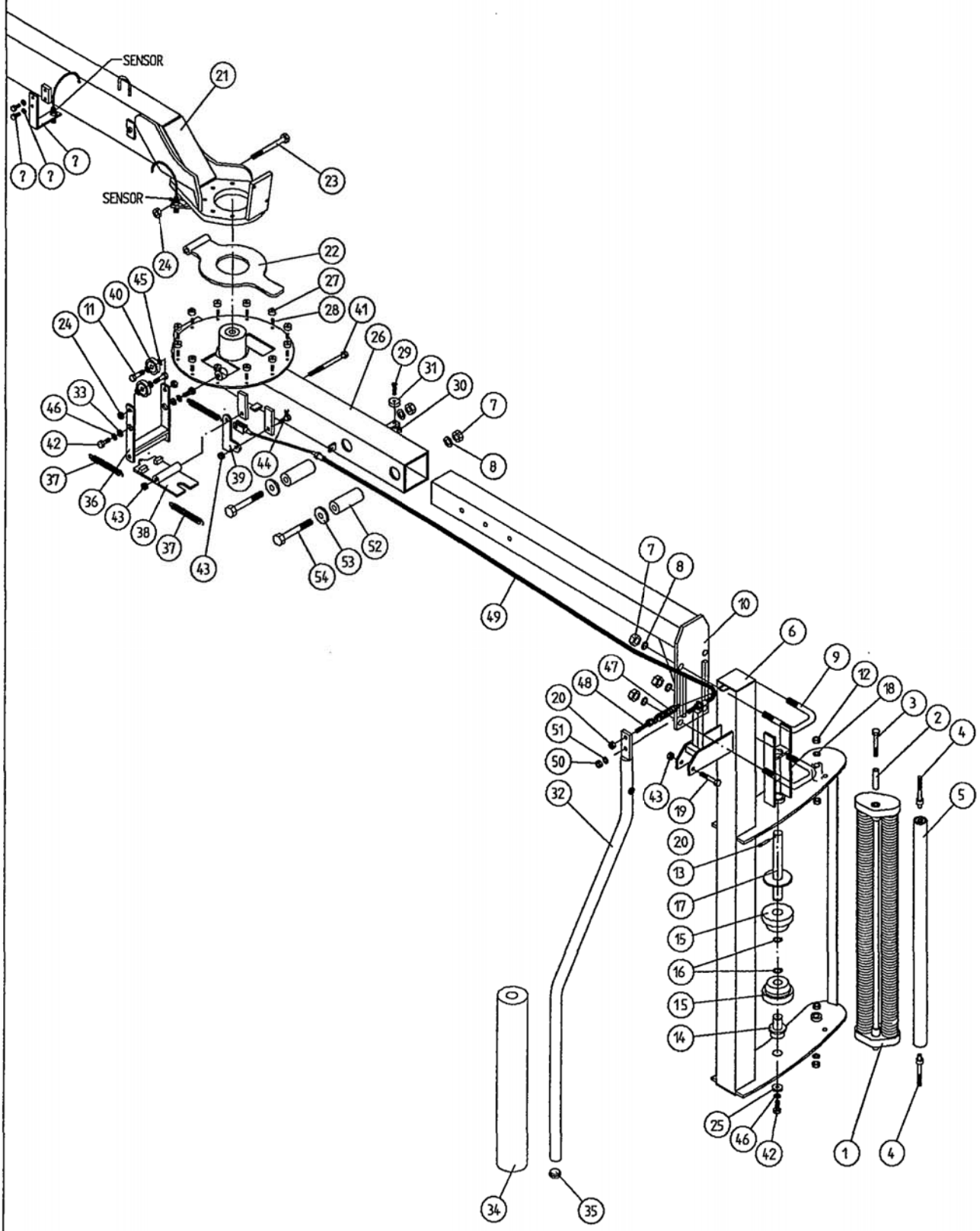
FILE NAME: WD80PL28

WD80PL28

TANCO COBRA 120 SQUARE BALE WRAPPER
A-FRAME AND SWING ARM ASSEMBLY

ITEM NO	DESCRIPTION	QTY	PART NO
1	MAST UPRIGHT ASSY	1	WD80-MUA
2	SWING ARM ASSY	1	WD80
3	SWING ARM PIVOT PIN	1	Z03-080-560
4	TENSION BUSH 40mm O.D. x 32mm I.D. x 25mm	2	Z03-20-14
5	1/4" LINCH PIN	3	Z03-22-03
6	SWING ARM SENSOR MOUNTING	1	WD80-SASM
7	TENSION BUSH 40mm O.D. x 32mm I.D. x 40mm	2	Z03-20-11
8	HYDRAULIC CYLINDER	1	Z01-01-CR10
9	SWING ARM MAGNET MOUNTING	1	WD80-SAMM
10	CLAMPING PLATE	1	WD80-315
11	M10 LOCKNUT	4	Z23-10
12	MAGNET	1	ZD80-020
13	RAM BOTTOM PIVOT PIN	1	Z03-02-54
14	120cc MOTOR C/W "O" RING	1	Z01-02-M
15	GEARBOX BRAKE C/W BEARING	1	Z01-02-GB
16	M12 x 40mm SETS	2	Z26-084S
17	12mm DIA SPRING WASHER	2	Z12-02-12
18	M8 x 45mm SETS	8	Z26-044S
19	M8 HEX NUTS	8	Z18-08
20	8mm DIA SPRING WASHER	8	Z12-02-08
21	M6 x 90mm BOLTS	2	Z26-037B
22	M6 LOCKNUT	2	Z23-06
23	BRACKET FOR ROTARTY ARMLOCK	1	WD80-RAL
24	CLAMPING PLATE	1	WD80-393
25	M16 x 120mm BOLTS	4	Z26-134B
26	M16 HEXKNUT	4	Z18-16
27	5/8" UNF x 210mm BOLT	2	Z31B-180
28	LEVER	1	WD80-390
29	PLUNGER	1	WA89-014
30	ROTARTY ARM LOCK RECEIVER	1	WD80-RALR
31	M10 x 30mm SET	2	Z26-069S
32	3/8" CURVED LINCH PIN	1	Z03-22-07
33	16mm DIA SPRING WASHER	6	Z12-02-16
34	5/8" UNF HEX NUT	2	Z15-10

TANCO COBRA 120 SQUARE BALE WRAPPER
FILM MAST AND DISPENSER ASSEMBLY

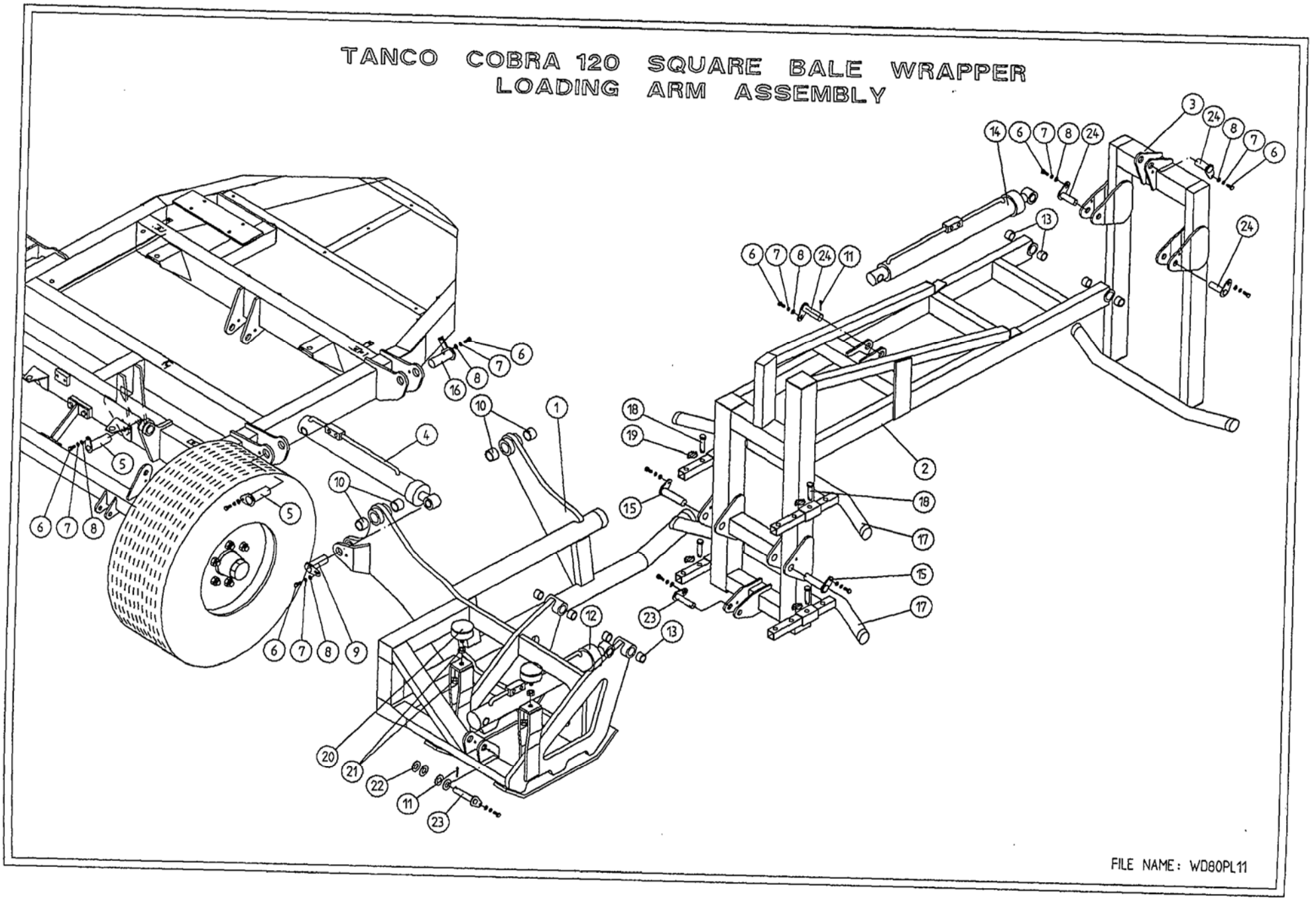


FILE NAME: WD80PL27

TANCO COBRA 120 SQUARE BALE WRAPPER
FILM MAST AND DISPENSER ASSEMBLY

ITEM NO	DESCRIPTION	QTY	PART NO
1	FILM DISPENSER UNIT MK9 70% STRETCH	1	D616
2	SLEEVE	1	D52012-95
3	M12 x 80mm HEX BOLT	2	Z26-0901B
4	SLAVE ROLLER LONG	1	Z06-SR95-L
5	SLAVE ROLLER PIVOT	2	WD64-SRP
6	DISPENSER MOUNTING	1	WD80-DM
7	M16 HEX NUT	6	Z18-16
8	16mm DIA SPRING WASHER	6	Z12-02-16
9	M16 "U" BOLTS	2	Z35-52
10	FILM MAST OUTER SECTION	1	WD80-FMOS
11	M12 x 40mm SETS	2	Z26-084S
12	M12 HEX NUT	8	Z18-12
13	5mm DIA x 45mm ROLL PIN	1	Z03-21-15
14	FILM SPOOL LOWER	1	WD80-FSL1
15	FILM MAST CONE	2	Z06-45-03
16	CIRCLIP	2	Z28-525
17	FILM SPOOL UPPER	1	WD80-FSU
18	12mm DIA SPRING WASHER	1	Z12-02-12
19	M10 x 70mm BOLT	1	Z26-068B
20	M8 LOCKNUT	1	Z23-08
21	SWING ARM ASSY	1	WD80-SWA
22	BRAKE TRIP PLATE ASSY	1	WD80-BTBA
23	M12 x 150mm BOLT	2	Z26-097B
24	M12 LOCKNUT	6	Z23-12
25	COLLAR	1	WD623-071
26	FILM MAST INNER SECTION	1	WD80-FMIS
27	MAGNET 20mm O.D. x 4mm I.D. x 10mm LONG	12	ZD80-020
28	4mm DIA x 14mm ROLL PINS	12	Z03-21004
29	M6 x 25mm CSK SET SCREW	1	
30	M6 LOCKNUT	2	Z23-06
31	MAGNET	1	
32	SAFETY ARM ASSY	1	WD80-SAA
33	COLLAR	1	WD80-372
34	1/2 METER IMPACT FOAM	1	Z44-13
35	1" MGB PLASTIC CAP	2	Z32-14
36	BRAKE TRIP BRACKET ASSY	1	WD80-BTBA1
37	BRAKE SPRING	3	Z07-02
38	LATCK PLATE ASSY	1	WD80-BLPA
39	BRAKE TRIP LINK	1	WD80-227
40	NSK 6301 BEARING	2	Z06-43
41	M10 x 140 BOLT	1	Z26-0726B
42	M10 x 25 SET	2	Z26-0611S
43	M10 LOCKNUT	2	Z23-10
44	M10 x 40 BOLT	1	Z26-064S
45	12mm DIA FLAT WASHER	4	Z10-02-12
46	10mm DIA SPRING WASHER	1	Z12-02-10
47	SAFETY ARM SPRING	1	Z07-05
48	ADJUSTER BOLT	1	
49	CABLE	1	
50	M8 HEX NUT	1	
51	8mm DIA SPRING WASHER	1	Z12-02-08
52	SPACER	2	
53	RETAINING COLLAR	2	
54	M16 x 130mm BOLT	2	Z26-135

TANCO COBRA 120 SQUARE BALE WRAPPER
LOADING ARM ASSEMBLY

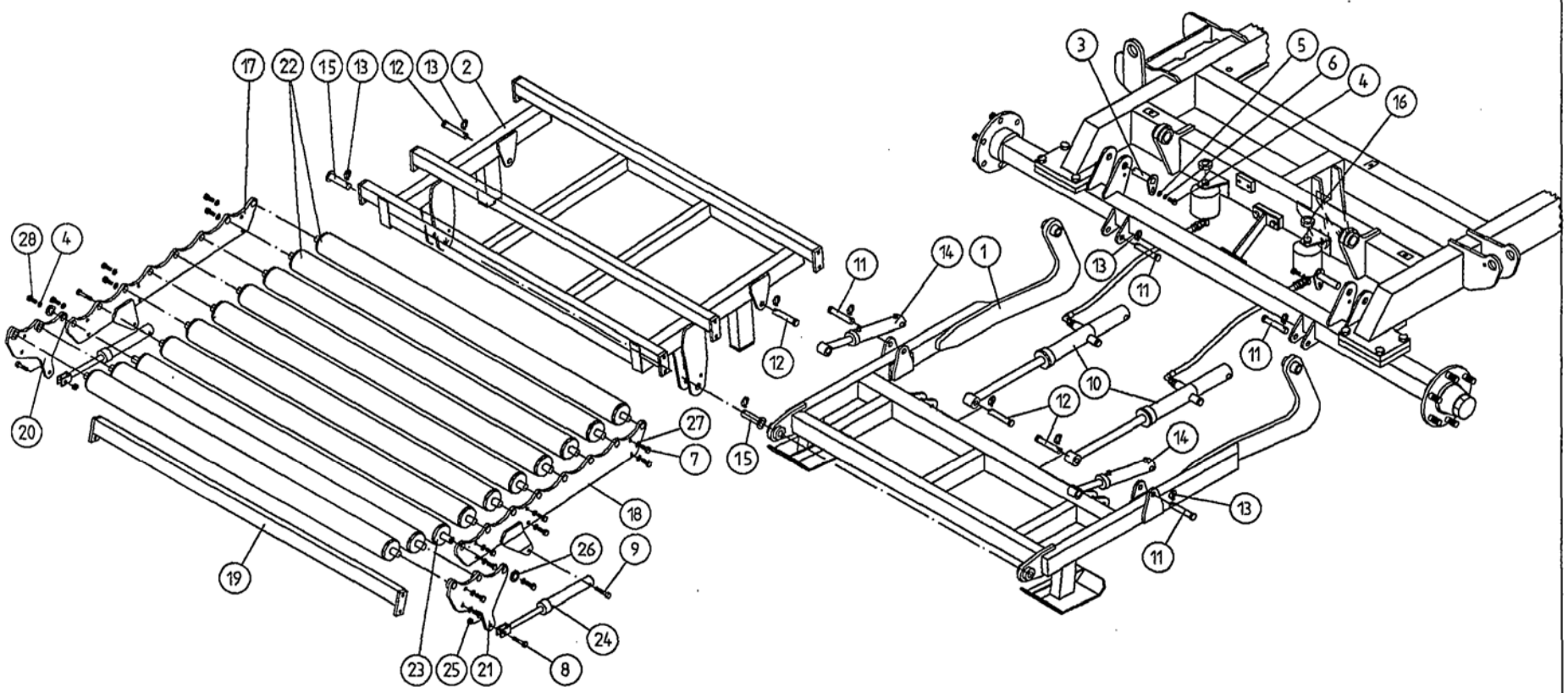


FILE NAME: WD80PL11

TANCO COBRA 120 SQUARE BALE WRAPPER
LOADING ARM ASSEMBLY

ITEM NO	DESCRIPTION	QTY	PART NO
1	LIFT ARM ASSEMBLY	1	WD80-LAGF
2	LIFT ARM - GRAB FRAME	1	WD80-LA
3	LIFT ARM - GRAB SECTION	1	WD80-LAGS
4	MAIN LOADING ARM LIFT RAM	1	Z01-01-CR40
5	LOADING ARM LIFT RAM BOTTOM PIVOT PIN & LOADING ARM REAR PIVOT PIN C/W GREASE NIPPLE	2	Z03-08-120
6	M10 HEX HD. SET x 20mm LONG	12	Z26-060S
7	M10mm DIA SPRING WASHER	12	Z12-02-10
8	10mm DIA FLAT WASHER	12	Z10-02-10
9	LOADING ARM LIFT RAM TOP PIVOT PIN C/W GREASE NIPPLE	1	Z03-080-100G
10	TENSION BUSH 50mm O.D. x 40mm I.D. x 40mm L.	4	Z03-20-12
11	1 1/2" x 3/16" SPLIT PIN	2	Z03-21-14
12	LOADING ARM SECONDARY LIFT RAM	1	Z01-01-CR20
13	TENSION BUSH 40mm O.D. x 32mm I.D. x 25mm L.	8	Z03-20-14
14	SQUEEZE RAM	1	Z01-01-T56
15	GRAB FRAME PIVOT PIN C/W GREASE NIPPLE	2	Z03-11-020
16	LOADING ARM FRONT PIVOT PIN C/W GREASE NIPPLE	1	Z03-080-120T
17	ADJUSTABLE BALE STOPS	2	WD80-LAGS
18	S73 PIN	2	Z03-04-73
19	7/16" LINCH PIN		Z03-22-06
20	RUBBER BUFFER 100mm DIA x 40mm LONG	2	Z40-26
21	M16 HEX NUT	4	Z18-16
22	1" DIA HEAVY DUTY FLAT WASHER	4	Z01-02-25
23	LOADING ARM SECONDARY LIFT RAM AND SQUEEZE RAM BOTTOM PIVOT PIN C/W GREASE NIPPLE	2	Z03-11-030
24	LOADING ARM SECONDARY LIFT RAM, SQUEEZE RAM TOP AND GRAB SECTION PIVOT PIN C/W GREASE NIPPLE	4	Z03-11-010

TANCO COBRA 120 SQUARE BALE WRAPPER
HYDRAULIC BALE RAMP



FILE NAME: WD80PL30

TANCO COBRA 120 SQUARE BALE WRAPPER
HYDRAULIC BALE RAMP

ITEM NO	DESCRIPTION	QTY	PART NO
1	HYDRAULIC BALE RAMP BOTTOM FRAME	1	WD80-HBRF
2	HYDRAULIC BALE RAMP TOP FRAME	1	WD80-HBTF
3	RAMP MAIN PIVOT PIN C/W GREASE NIPPLE	2	Z03-01-905
4	M10 x 20mm SETS TUFLOCK	2	Z26-060ST
5	10mm DIA MACHINED FLAT WASHER	2	Z11-02-10
6	10mm DIA SPRING WASHER	9	Z12-02-10
7	M12 x 30mm SETS	16	Z26-082S
8	M12 x 50mm BOLTS	2	Z26-086B
9	M12 x 80mm BOLTS	2	Z26-091B
10	HYDRAULIC RAM C/W ACCUMULATOR	2	Z01-01-AWD
11	SPAREX PIN	4	Z03-04-74
12	SPAREX PIN	4	Z03-04-73
13	7/16" DIA LINCH PIN	10	Z03-22-06
14	HYDRAULIC RAM (TOP FRAME)	2	Z01-01-SG30
15	TOP FRAME PIVOT PIN	2	Z03-03-50
16	M28 x 1.5mm PITCH HEX NUT	2	Z18-28
17	TOP SIDE PLATE ASSY R.H.S.	1	WD80-HBTP1
18	TOP SIDE PLATE ASSY L.H.S.	1	WD80-HBTP2
19	TIE BAR ASSY	1	WD80-HBRTB
20	REAR SIDE PLATE ASSY R.H.S.	1	WD80-HBRP1
21	REAR SIDE PLATE ASSY L.H.S.	1	WD80-HBRP2
22	ROLLER ASSY	9	WD80-HBRR
23	PIVOT ROLLER ASSY	1	WD80-HBRPR
24	HYDRAULIC RAM	2	Z01-01-AW25S
25	M12 LOCKNUT	2	Z23-12
26	RETAINING COLLAR	2	WD623-071
27	12mm DIA SPRING WASHER	16	Z12-02-12
28	M10 x 25mm SET	2	Z26-0611S

NOTES

NOTES

EC DECLARATION OF CONFORMITY

ACCORDING TO DIRECTIVES 89/392/336/EEC AS AMENDED.

MANUFACTURER: TANCO ENGINEERING CO LTD
BAGENALSTOWN
CO CARLOW
IRELAND

CERTIFIES THAT THE FOLLOWING PRODUCT:

AUTOWRAP

MODEL: COBRA 120

SERIAL NO.: D2600 - D5000

To which this declaration relates, corresponds to the essential requirements of the Directive 89/392/336/EEC as amended.

To conform to these essential health and safety requirements, the provisions of the following harmonised standards were particularly considered:

EN 292 - 1,2, EN 294, EN 1152, prEN 703, prEN 811, prEN 1553, prEN 982.

DATE: 01/01/98 **SIGNATURE:** Tommy Agars.

TOMMY AGARS
TECHNICAL MANAGER