

CONAIR CAT-A-PULLER INSTRUCTIONS

MODELS:

205-4
207-3PC
210-6P

UGE017/0597



WARNING - Reliance on this Manual Could Result in Severe Bodily Injury or Death!

This manual is out-of-date and is provided only for its technical information, data and capacities. Portions of this manual detailing procedures or precautions in the operation, inspection, maintenance and repair of the product forming the subject matter of this manual may be inadequate, inaccurate, and/or incomplete and cannot be used, followed, or relied upon. Contact Conair at info@conairgroup.com or 1-800-654-6661 for more current information, warnings, and materials about more recent product manuals containing warnings, information, precautions, and procedures that may be more adequate than those contained in this out-of-date manual.

CAUTION

DISCONNECT ALL ELECTRICAL POWER TO THIS MACHINE AT THE POWER SOURCE AND MAKE SURE THAT ALL MACHINE MOTION HAS STOPPED BEFORE OPENING CONTROL BOX PANELS OR DOORS OR REMOVING GUARDS!

The primary importance in the operation of any machinery is safety as well as proper maintenance. The following points should be observed in order to provide for the safe as well as long lasting operation of Gatto equipment.

1. Always replace guards.
2. Train operators to understand the operation of all moving parts.
3. Follow simple instructions regarding lubrication and preventative maintenance.
4. Keep machine clean.

The above steps will ensure a safe and long lasting piece of equipment for many years.

Section 1

GENERAL SPECIFICATIONS

1. - **GENERAL SPECIFICATIONS**

1.1 - **MODEL 205-4**

1.1.1 - **Technical Data**

Line Capacity	-	3" Belt Opening
Centerline Height	-	42" +/- 2"
Belt Width	-	4"
Belt Contact	-	15"
Machine O.A. Length	-	28 1/2"
Machine O.A. Width	-	28"
Machine O.A. Height	-	59 1/2"
Machine Approx. Weight	-	900 Pounds

1.1.2 - **D. C. Motor Drive**

Motor Horsepower	-	2 HP
Motor Speed Range	-	90 to 1750 RPM
Motor Armature Voltage (Variable)	-	0 to 180 VDC
Motor Field Voltage	-	200 VDC
Armature Current at Full Load	-	11 Amp DC
Field Current	-	0.4 Amp DC
Motor Control	-	230 Volt Single Phase DC Motor
Control with Armature Feedback	-	SCR Type 2% Speed Regulation
Single Phase Line Amps	-	17.5 Amp
Rectifier Fuse KAC	-	30 Amp
Speed control by remote potentiometer		

Electric Power Connection Plug - Single Phase - 3 Wire

Less than 250 Volts AC	-	NEMA L6-30
Greater than 250 volts but less than 480	-	NEMA L8-30
Greater than 480 volts	-	NEMA L9-30

Electric Power Cord - 600 V Class

Below 250 Volts	-	AWG 12/3 Cond
Above 250 Volts	-	AWG 14/3 Cond

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1.3 - APPLICATION AND MODE OF OPERATION

1.3.1 - Puller Function

The models 207 and 210 "CAT-A-PULLERS" are specifically designed for pulling either of the following:

1. Medium to large profiles
2. Medium diameter tubing
3. Small diameter pipe 4" (4.5" O.D.)

The take-off on the model 210 is through two belts. The 210 is used on higher speed applications. The take-off on the model 207 is through two cleated chain traction belts. The 207 is used in slower speed applications, but has a greater pulling force.

The 205-4 puller has been specifically designed for use in pulling small profile, tubing, pipe and shapes. The take-off is through two belts, one above the other. The speed on an A.C. drive is governed by a variable speed drive and/or three speed transmission. On a D.C. drive, the speed is governed by a potentiometer and/or a three speed transmission.

1.3.2 - Placement in the Line

The puller is furnished for right-to-left or left-to-right extrudate direction. The CAT-A-PULLER is completely lubricated and tested prior to shipment. After inspection for possible shipping damage, the puller is ready for installation in the line. The machine is mounted on four swivel casters for adjusting the machine in line. Once in position, the four 2" threaded floor lock screws are then adjusted to achieve the desired height. The floor locks are equipped with rubber cushioned floor pads. After connecting to electric power (section 3.1) and air supply (80 P.S.I. minimum), the machine is ready for operation. Read instruction manual prior to start-up.

Section 2

MECHANICAL SYSTEM

2. - MECHANICAL SYSTEM

2.1 - 207 AND 210
MACHINE FRAME AND SUPPORT SYSTEM

The machine frame is an all welded steel structure supported on four swivel casters. Drive motor, reducer, transmission and all drive train components are mounted inside the frame and completely guarded. The operating lever of the transmission is extended through the frame on the operators side for easy accessibility. Four 2" floor lock screws with rubber cushioned pads are provided to anchor the machine to the floor.

2.2 - MANUAL SHIFT TRANSMISSION

The manual shift transmission is a four ratio, four shift position unit. The ratios are 1.000, 1.824, 3.039 and 4.012. Adjustments are made using the handle that projects through the frame. Input and output shafts rotate in the same direction.

C A U T I O N - Never shift the transmission while the machine is running!

2.3 - 207 AND 210
BELT PULLING SYSTEM

2.3.1 - Drive Chain and Idler Assembly

Both the models 207 and 210 use a chain and sprocket system that includes an idler assembly. Double, self-lube chain is used with double pitch sprockets for strength.

2.3.2 - Belt Opening Adjustment

The belt opening can be manually adjusted (raise or lower) by turning the handwheel at the top of the machine. The pneumatic system is engaged by using the handle on the side of the machine. This will apply pressure to the extrudate for a greater pulling force. For thin wall pipe, the handwheel is used without the pneumatic system with the weight of the top beam being the only pressure applied. The rate at which the top beam lowers is preset at the factory; however, the flow-control valve on the air cylinder can be adjusted as per the customer's needs.

2.3.3 - 207 Traction Belt

The model 207 CAT-A-PULLER uses a cleated, chain traction belt driven by triple-row-tooth sprockets, mounted on upper and lower beam assemblies to pull the extrudate. Various style and durometer cleats are available. The cleats are mounted onto a triplex type chain with special attachments for cleat mounting. Chain rails are used to keep the chain rigid.

2.3.4 - 210 Traction Belt

The model 210 CAT-A-PULLER uses a mandrel-made type belt for pulling the extrudate. These belts are driven by 6" x 6" crown face pulleys mounted on upper and lower beam assemblies. Various style and durometer belts are available. A pressure roll assembly is used to keep the belt rigid.

2.3.5 - 205-4 Traction Belt

The model 205-4 CAT-A-PULLER uses a mandrel-made type belt for pulling the extrudate. These belts are driven by 4" x 4" crown face pulleys mounted on upper and lower beam assemblies. Various style and durometer belts are available. A pressure roll assembly is used to keep the belt rigid.

2.4 - 205-4 MACHINE FRAME AND SUPPORT SYSTEM

The machine frame is an all welded steel structure supported on four (4) vertically adjustable wheels. Drive motors and drive train components are mounted inside the frame and completely guarded. When a transmission is supplied, the operating levers extend through the frame on the exit end of the puller for easy accessibility. Two (2) floor lock screws are provided to anchor the machine to the floor. Vari-drive mechanical adjustment handwheels are positioned so that adjustment may be made without removing guards or covers.

2.4 - 205-4 BELT PULLING SYSTEM

The belt pulling system is mounted above the machine top plate on two (2) vertical beam shafts. There is a patented jam-free arrangement for the top belt. The machine operator does not have to set the height of the top belt exactly to the extrusion as the top belt will set its own height once the extrusion comes out to size.

2.5 - 205-4
BELT PULLING SYSTEM (Continued)

More or less pressure can be applied by turning a hand-wheel to raise or lower the top section. The lower section has tandem traction; therefore, the more pressure on the lower section, the better the traction. If a high spot or lump should pass through, the top will automatically rise to allow it to pass through without stripping the belts.

- 2.6 - On D.C. drives WITHOUT a transmission, a JACKSHAFT or gear reducer provides the additional speed reduction to allow the motor speed range to provide the pulling speed range of 20 to 400 ft./min. D.C. motor speed is varied over the 90 to 1750 RPM range using the remote portable speed control potentiometer. On D.C. drives WITH a transmission and a gear reducer, the speed may be varied over three (3) ranges as set by the transmission ratio setting. The transmission has three (3) ratios; 4 to 1 speed reduction, 1 to 1 through drive and 1 to 4 speed increase. The 4 to 1 reduction provides a speed range of 3.4 to 66 ft./min. The 1 to 1 through drive provides a speed range of 13.5 to 262.6 ft./min. The 1 to 4 speed increase provides a speed range of 54 ft./min. to 1050 RPM. Again, D.C. motor speed is varied over the 90 to 1750 RPM range using the remote portable speed control potentiometer.

The D.C. motor control power is turned "on" and "off" by a circuit breaker on the front panel. An amber pilot light indicates power "on". The D.C. motor is started and stopped by "start" and "stop" pushbuttons on the panel.

CAUTION

The D.C. motor field is energized at 200 volts D.C. when the circuit breaker is in the "on" position. Leaving the drive in the "on" position without running, the motor can result in premature drive failure. If the drive is going to be stopped for any length of time, the circuit breaker must be placed in the "off" position.

Section 3

ELECTRICAL SYSTEMS

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3. - ELECTRICAL SYSTEM

3.1 - ELECTRICAL POWER SUPPLY

The A.C. power supply for the D.C. variable speed motor drive is single phase, 50 or 60 HZ. Power requirements are approximately 5 KVA. Connect the machine through a single-phased fused disconnect. Make sure the power is grounded through the power cable to the plant electrical ground. The power cord is a #10 AWG, 3 conductor type. The twist lock connectors are as follows:

1. 230/1/60 uses Bryant #70630NP plug and #70630NC connector or equivalents.
2. 460/1/60 uses Bryant #70830NP plug and #70830NC connector or equivalents.

In wet locations it is recommended that the machine be separately grounded.

The SCR single-phased D.C. motor control module is available in 220, 230 and 240 A.C. volt rating only. For all other line voltages, the SCR D.C. motor control module must be supplied through a 5 KVA single-phased isolation transformer with the primary at the line voltage and the secondary at 230 volts. This machine should be connected to the customer's power supply through a disconnect switch fused in accordance with the National Electrical Code and any applicable state or local codes.

3.2 - ELECTRIC CONTROL PANEL

The motor control power is turned on and off by a circuit breaker. A pilot light indicates power to be on. The D.C. motor is started and stopped by start and stop buttons on the panel. Speed control is through a remote station potentiometer (10 turn) and duodial.

NOTE: UNDER NO CONDITIONS SHOULD THE SHIELD ON THE REMOTE BELT SPEED POTENTIOMETER BE GROUNDED. THIS CONDITION WILL CAUSE DAMAGE TO THE DRIVE SYSTEM.

C A U T I O N

The D.C. motor field is energized at 200 volts D.C. when the pilot light is "on", even though the D.C. motor is NOT running.

3.3 - SPEED COMPUTER

A speed computer is available for digital readout of pulling speed in inches per minute, feet per minute and yards per minute. The device is mounted directly on the traction belt to ensure the most accurate reading. Electric power is supplied through transformer on machine. Speed computers are available in metric upon request.

3.3.1 - Electric Remote Control (ERC)

See Section 2.6

3.3.2 - Footage Counter - Two Models (Electric/Mechanical)

A mechanical footage counter or an electronic footage counter is available to measure production output. These devices are mounted so that the measuring wheel directly contacts the traction belt.

3.3.3 - 1% Speed Regulation

To provide improved speed regulation over the standard drive, tachometer feedback is used in place of armature feedback.

3.3.4 - + RPM Digital Drive Control (Optional)

To provide improved speed regulation over the standard drive, digital control speed regulation is available in place of armature feedback. A digital tachometer generator is mounted on the D.C. motor to interphase with the digital controller. This option uses a thumb wheel switch to control machine speed instead of a ten turn potentiometer.

LUBRICATING INSTRUCTIONS (Continued)

HIGH SPEED OPERATION - In the higher speed ranges too much grease will cause over-heating. The amount of grease that the bearing will take for a particular high speed application can only be determined by experience (see "Operating Temperature" below). If excess grease in the bearing causes over-heating, it will be necessary to remove grease fitting to permit excess grease to escape. The bearing has been greased at the factory and is ready to run. When establishing a relubrication schedule, note that a small amount of grease at frequent intervals is preferable to a large amount at infrequent intervals.

OPERATION IN PRESENCE OF DUST, WATER OR CORROSIVE VAPORS - Under these conditions the bearing should contain as much grease as speed will permit since a full bearing with consequent slight leakage is the best protection against entrance of foreign material. In the higher speed ranges too much grease will cause over-heating (see "High Speed Operation" above). In the lower speed ranges it is advisable to add extra grease to a new bearing before putting into operation. Bearings should be greased as often as necessary (daily if required) to maintain a slight leakage at the seals.

NORMAL OPERATION - This bearing has been greased at the factory and is ready to run. The following table is a general guide for relubrication. However, certain conditions may require a change of lubricating periods as dictated by experience (see "High Speed Operation" and "Operation in Presence of Dust, Water or Corrosive Vapors" above).

OPERATING TEMPERATURE - Abnormal bearing temperature may indicate faulty lubrication. Normal temperature may range from "cool to warm to the touch" up to a point "too hot to touch for more than a few seconds", depending on bearing size and speed, and surrounding conditions. Usually high temperature accompanied by excessive leakage of grease indicates too much grease. High temperature with no grease showing at the seals, particularly if the bearing seems noisy, usually indicates too little grease. Normal temperature and slight showing of grease at the seals indicate proper lubrication.

KIND OF GREASE - Many ordinary cup greases will disintegrate at speeds far below those at which Dodge bearings will operate successfully if proper grease is used. Dodge bearings have been lubricated at the factory with No. 2 consistency lithium base grease or a grease which is compatible with original lubricant and suitable for ball bearing service. In unusual or doubtful cases the recommendation of a reputable grease manufacturer should be secured.

Section 4
SERVICING

4. - **SERVICING**

The CAT-A-PULLER was designed for continuous operation with a minimum amount of maintenance. Keep the machine cleaned and well lubricated and it will remain in good working condition. Operators respect and enjoy working with clean machinery.

4.1 - **BELTS**

Facilities should be made to remove water from the extrudate before it reaches the CAT-A-PULLER. Water will corrode the machine and reduce its useful life. Also, water on the belts will reduce traction.

To obtain good traction, belts should be kept TAUT. New belts may stretch a bit. If adjusting of belts is required, this may be accomplished by taking up on the bearing block positioning screw.

If the belts do not track properly, keep the machine running and take up on whichever bearing block positioning screw will move belt back into position.

4.1.1 - **Models 205-4 and 210-6P**

If the belts need to be changed, it may be accomplished as follows:

1. Disconnect power and air and remove guard.
2. Loosen bearing block positioning screws and slack off the belt.
3. Remove old belt and put on the new one.
4. Take up on the bearing block positioning screw and adjust tracking as desired above.

The pulleys are crowned to keep the belts tracking and machined to prevent slipping. However, if dirt or a piece of plastic should stick to one of the pulleys, it could cause a variation in the extrudate. Stop the machine, disconnect power and air and clean off the pulley with a knife or scraper.

4.1.2 - **Model 207**

If the cleats need to be changed, it may be accomplished as follows:

1. Disconnect power and air and remove guard.
2. Loosen take up screws and slack off belt (use 1" wrench).

4.1.2 - Model 207 (Continued)

3. To remove old cleat use 5/32" Allen wrench and take off two #10-32 set screws and remove cleat.
4. To remove entire chain, find connecting link and remove.
5. Reverse procedure to install new belt.

4.2 - D.C. MOTOR (MAINTENANCE)

The motor ball bearings are pre-lubricated, but the motors have provision for re-greasing. Refer to GE manual GEH-3967E for re-greasing and brush maintenance instructions.

4.3 - MANUAL SHIFT TRANSMISSION

The manual shift transmission is oil lubricated. Use Mobil DTE oil extra heavy duty or equivalent SAE 40 oil. Oil should be changed every 1000 hours.

4.4 - DRIVE BELTS

All drive belts are timing belt types and stretch very little with use. There are small adjustments for initial tensioning. Replace worn or frayed belts.

4.5 - FIXED REDUCER

Uses 600 W gear oil

4.6 - GENERAL INFORMATION

Ball Bearings - The ball bearings are pre-lubricated type. They have provision for re-greasing and should be re-greased on a regular basis on 1000 hour intervals. Use No. 2 Lithium-base, ball bearing grease.

Sleeve Bearings - The idler arm bearings are equipped with lubrication fittings. Lubricate every 2000 hours of operation using No. 2 Lithium-base ball bearing grease.

Idler Sprockets - The idler sprockets have grease fittings and should be greased monthly.

IMPORTANT NOTICE: Bearing performance depends on proper installation, lubrication and maintenance. Therefore, all instructions in the manual must be carefully followed.

INSTALLATION INSTRUCTIONS

1. Clean shaft and bore of bearing.
2. Slip bearing into position. In the case of screw conveyor hanger bearings, mount so flow of material is against locking collar.
3. If the bearing has flanged collar, push it against end of race while tightening set screws to prevent possible collar wobble.
4. For bearings with collars, tighten set screws to recommend torque given in table below; or using a piece of pipe on wrench, tighten until screw stops turning and wrench starts to spring. **C A U T I O N** - For bearings without collars do not exceed recommended torque.

Set Screw Dia.	Hex Size Across Flats	Recommended Wrench Torque (Pound-Inches)	When a torque wrench is not available, it is possible to approximate these torque values by using an ordinary wrench and piece of pipe or wrench. For example, to obtain 140 pound-inches wrench torque, pull 20 pounds at 7" distance from center of pull to center of screw, or pull 10 pounds at a 14" distance, etc.
No. 10 1/4 5/16 3/8 7/16	3/32 1/8 5/32 3/16 7/32	30 70 140 220 350	

LUBRICATION INSTRUCTIONS

STORAGE OR SPECIAL SHUTDOWN - If exposed to wet or dusty conditions or to corrosive vapors, extra protection is necessary. Add grease until it shows at the seals; rotate the bearing to distribute; cover the bearing. After storage or idle period, add a little fresh grease before running.

LUBRICATION GUIDE

Read Preceding Paragraphs
 Before Establishing Lubrication Schedule

Hours Run Per Day	Suggested Lubrication Period in Weeks							
	1 to 250 RPM.	251 to 500 RPM	501 to 750 RPM	751 to 1000 RPM	1001 to 1500 RPM	1501 to 2000 RPM	2001 to 2500 RPM	2501 to 3000 RPM
8	12	12	10	7	5	4	3	2
16	12	7	5	4	2	2	1	1
24	10	5	3	2	1	1	1	1

4.7 - PNEUMATIC SYSTEM SERVICING

When dirt appears in the glass bowls of the filter, it is time to clean out as follows:

First, disconnect air supply. Then clean plastic bowl using warm water only. Clean other parts using warm water and soap. Blow air through filter element in direction opposite that of normal air flow to dislodge surface contaminants. Dry parts and blow out internal passages in body using clean, dry compressed air. Inspect each part carefully. Replace any parts that are damaged.

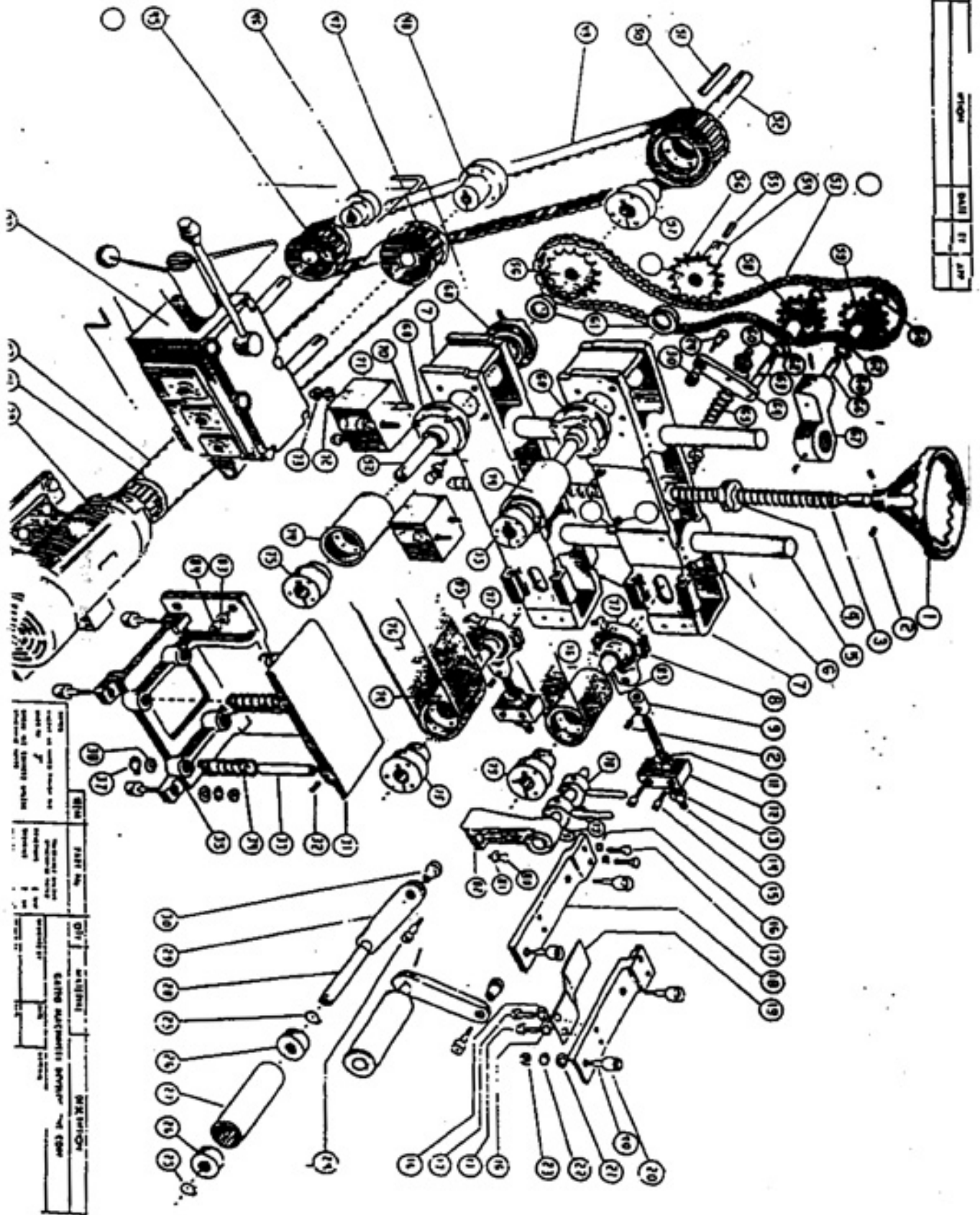
Section 5

RENEWAL PARTS

The high productivity which industry seeks to maintain, demands a well planned maintenance program - the success of which often can depend on the number and type of spare parts on hand. Serious consideration should be given to having all vital replacement components on hand to protect the units against costly down time.

A detailed parts list is enclosed with recommendations for spare parts that should be stocked for your equipment (Asterisk *).

Be sure to include model number and serial number listed on name-plate when ordering replacement parts.



PART No. _____ QUANTITY _____ DATE _____ BY _____ CHECKED _____ APPROVED _____ TITLE _____	DIVISION _____ PROJECT _____ DRAWING NO. _____ SHEET NO. _____ OF _____
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DATE	BY	CHKD	APPD

REFERENCE DRAWING
CTI 100

SPARE PARTS LIST

<u>Machine Model No.</u>	<u>Item No.</u>	<u>Description</u>	<u>Part Number</u>
205-4	1	11" Diameter Handwheel	0101-00648
	3	Height Adjustment Screw	0101-00567
	4	Threaded Collar	3529-00013
	8	SC-1" Take-Up Bearing	3506-00024
	20	CF-11/16S Cam Rollers	3501-00018
	24	41711 Shoulder Screw	4533-00075
	25-30	115A-208 Complete Pressure Roll Assembly	0101-00702
	26	Ball Bearing	3558-00197
	27	Pressure Roller 115A-015	0101-00249
	28	Pressure Roller Shaft 115A-016	0101-00257
	29	Pressure Roller Arm 115A-027	0101-00265
	30	FB-69-6 Flange Bushing	3561-00041
	34	Compression Spring - 47 SP	4542-00126
	39B	D.C. Drive Motor	
	40	Motor Drive Pulley	Dependent On Speed
	41	Taperlock	Dependent On Speed
	42	Motor Drive Pulley Belt	Dependent On Speed
	43	Transmission (3 Speed)	3550-00015
	45	Transmission Input Pulley	Dependent On Speed
	46	Taperlock (1")	Dependent On Speed

SPARE PARTS LIST

<u>Machine Model No.</u>	<u>Item No.</u>	<u>Description</u>	<u>Part Number</u>	
205-4	47	Transmission Output Pulley	Dependent On Speed	
	48	Taperlock (1")	Dependent On Speed	
	49	Transmission Drive Belt	Dependent On Speed	
	50	Drive Shaft Pulley	Dependent On Speed	
	52	Lower Exit Shaft 115A-360	0101-00362	
	53	#40 Self Lube Chain (42 1/2")	3522-00042	
	54	Upper Exit Shaft 115A-359	0101-00354	
	56	4024 - Sprocket (1" Bore)	3548-00199	
	57	Taperlock (1")	Dependent On Speed	
	58	4015 - Sprocket	3548-00016	
	59	4018 - Sprocket	3548-00571	
	62	D-251 Bushing	3561-00625	
	63-64	Lower Idler Assembly 115A-284	0101-00664	
	65	Spring 40-L	4542-00118	
	Right to Left	66-67	Upper Idler Arm Assembly 115A-666	0101-04996
	Left to Right	66-67	Upper Idler Arm Assembly 115A-667	0101-05003
		68	MFC-1" Piloted Flange Bearings	3505-00187
		74	Pulley 115A-446	0101-00575
		75	SD-1" Taperlock	3518-00054

SPARE PARTS LIST

<u>Machine Model No.</u>	<u>Item No.</u>	<u>Description</u>	<u>Part Number</u> As Per Customer's Specifications
205-4	76	Traction Belt 4" x 41 3/4"	
	77	SC-1" Take-Up Bearing	3506-00024
	78	Feed Guide 115A-017	0101-01482
	82	Guide Shaft Brkt. 115A-585	0101-01164
		Swivel Caster	3521-00022

SPARE PARTS LIST

<u>Machine Model No.</u>	<u>Item No.</u>	<u>Description</u>	<u>Part Number</u>
205-4			
AC	1	CH10250T1343, Speed Switch	1619-00192
AC	2	800T-A2D1, Start Switch	1593-00067
AC	3	800T-D6D2, Stop Switch	1593-00679
AC	4A	AGC 1/2, Amp Fuse	1552-00834
AC	4B	HKPHH, Fuse Holder	1503-00047
AC	5	Z-20161, Reset Switch	1601-00039
DC	1A	800T-P16R, Power Switch	1584-00011
DC	1B	800T-N26R, Red Lens	1519-00071
DC	1C	800T-N65, 6.3V Bulb	1569-00048
DC	2	JA2-A3-A, Circuit Breaker	1508-00045
DC	3	800T-D6D2, Stop Switch	1593-00679
DC	4	800T-A2D1, Start Switch	1593-00067

SPARE PARTS LIST

Model 210 Beam

<u>Machine Model No.</u>	<u>Item No.</u>	<u>Description</u>	<u>Part Number</u>
210	1	Shaft, Lower-drive	0102-00625
	2	Shaft, Upper-drive	0102-00625
	3	Shaft, Lower-driven	0102-00803
	4	Shaft, Upper-driven	0102-00765
	5	Bearing, Piloted SC-1 1/4	3505-00195
	6	Bearing, Wide Slot SC-1 1/4	3506-00059
	7	Pulley, 6" x 6" Crown Face	0102-00676
	* 8A	Belt, 70 Durometer (GAR) or	3510-00152
	8B	Belt, 40 Durometer (GWR)	3510-00047
		- OTHER BELTS AVAILABLE -	
	9	Belt Pressure Rollers	0102-00293
	10	Belt Guide Rollers	0101-00672

207/210 Common Mechanical

207/210	1A	Upper Idler Assembly (R/L)	0102-00919
	1B	Upper Idler Assembly (L/R)	0102-00927
	2	Upper Idler Sprocket	3548-01624
	3	Tensioner Shaft	3563-00049
	* 4	Spring M-4	4542-00185
	* 5	Chain D40-SL	3523-00011

SPARE PARTS LIST

207/210 Common Mechanical (Continued)

<u>Machine Model No.</u>	<u>Item No.</u>	<u>Description</u>	<u>Part Number</u>
	6	Sprocket D40B-32-1 1/4	3548-01748
	7	Transmission, Drive All	3550-00031
	8A	Reducer, 3810	3551-00027
	8B	Reducer, 3820	3551-00361
	8C	Reducer, 3840	3551-00043
	9	Motor, 3 HP (Seco)	1579-00062
	10	Guide Roller Assembly	0102-01761

207/210 Pneumatic

	30A	Filter-Regulator-Lube Unit	5501-00037
	30B	Bracket and Nut	5551-00119
	30C	Gauge Only, 0-160	5518-00308
*	31	Beam Valve, PL-25	5545-00085
	32A	Beam Cylinder SMS-3X5	5503-00379
*	32B	Cylinder Repair Kit	5508-00164
*	33	Valve Flo-Control	5540-00192

Model 207 Beam

207	1	Shaft, Lower-drive	0102-00757
	2	Shaft, Upper-drive	0102-00757
	3	Shaft, Lower-driven	0102-00803
	4	Shaft, Upper-driven	0102-00765

SPARE PARTS LIST

Model 207 Beam (Continued)

<u>Machine Model No.</u>	<u>Item No.</u>	<u>Description</u>	<u>Part Number</u>
	5	Bearing, Piloted SC-1 1/4	3505-00195
	6	Bearing, Wide-Slot SC-1 1/4	3506-00059
	7	Sprocket, E50C30	0102-02156
	8	Chain, 50-3, 127 Pitch	3522-00026
	9	Chain Rail	0102-02784
	* 10A	Cleats, Flat	0813-00032
		or	
	10B	Cleats, Vee	0813-00024
		- OTHER CLEATS AVAILABLE -	
Flat		Complete Chain Belt Assembly	0104-00177
Vee		Complete Chain Belt Assembly	0104-00142
<u>207/210 Electrical</u>			
<u>207/210</u>			
		Electrical Panel	
	1A	Speed Computer (English)	1524-00012
	1B	Speed Computer (Metric)	1525-00016
	2A	Pilot Light 800T-P16	1584-00011
	2B	Amber Lens 800T-N26A	1519-00101
	* 2C	Bulb Only, 6.3V	1569-00048
	* 3	Circuit Breaker	1508-00045
	4	"On" Black Pushbutton	1593-00067
	5	"Off" Red Mushroom Button	1593-00393

SPARE PARTS LIST

Model 207/210 Control Box

<u>Machine Model No.</u>	<u>Item No.</u>	<u>Description</u>	<u>Part Number</u>
	1	Seco Board 8800	1535-00057
	2	Transformer TA-1-81210	1634-00093
*	3	Fuse, FNM-1/2	1552-00346
	4A	Relay KRP-11AN	1601-00144
	4B	Base, RB-08	1647-00041
*	5A	Fuse, SC-30	1552-00982
	5B	Fuse Block 2808	1502-00078
	6	5 KVA Transformer	

Remote Station

	1	Micro-Switch BZE6-2RN	1613-00115
*	2A	Potentiometer AR2KL25	1586-00027



EQUIPMENT PARTS LIST
TO ORDER PARTS CALL TOLL FREE (800) 458-1960

Product: Puller , 205-4-15
REV #: TOTB/0403
Instruction Manual:

Model No.: 205-4-15

Serial No.:

Assembly / Part Number (s)

Wiring Diagram Number (s)

Reference Number	Part Number	Qty	Description
	General		
1	0101-00044	2	Floor Lock Screw Assm.
2	4504-00104	2	Latch-Springs 57-10-102-50
3	4542-00118	1	Spring-40L Ext 4 1/8
4	4542-00126	4	Spring Ajax
5	0110-00049	4	Caster-Swivel Assm.
6	29053615	1	Bushing , Sheeve 1" Dia
7	3518-01042	1	Bushing Taperlock 1210-7
8	3544-00259	1	Pulley - Timing
9	3544-01697	1	Pulley - Timing
10	3518-00194	2	Bushing Taperlock SH 1"
11	3544-03584	1	Pulley - Univ.
12	3544-03592	2	Pulley - P36-8M-20 SH
13	3558-01312	2	Bearing,Ball
14	3561-00041	2	Bearing - Bronze FB69-06
15	3561-00424	2	Bearing - Bronze FLG
16	3501-00018	8	Bearing
17	3506-00024	4	Bearing TakeUp RG SC 1"
	Motor		
18	1579-00623	1	Motor DC 2hp
19	1616-00264	1	Ring Kit
	Belts		
20	3510-00713	2	Belts,Flat 4" x 41 3/4
21	3512-00656	1	Belt - Timing 600H150s
22	3512-01709	1	Belt , 1040-8M-20
	Transformer Opt.		
23	315-017-1022	1	Transformer 5kva 240/480v



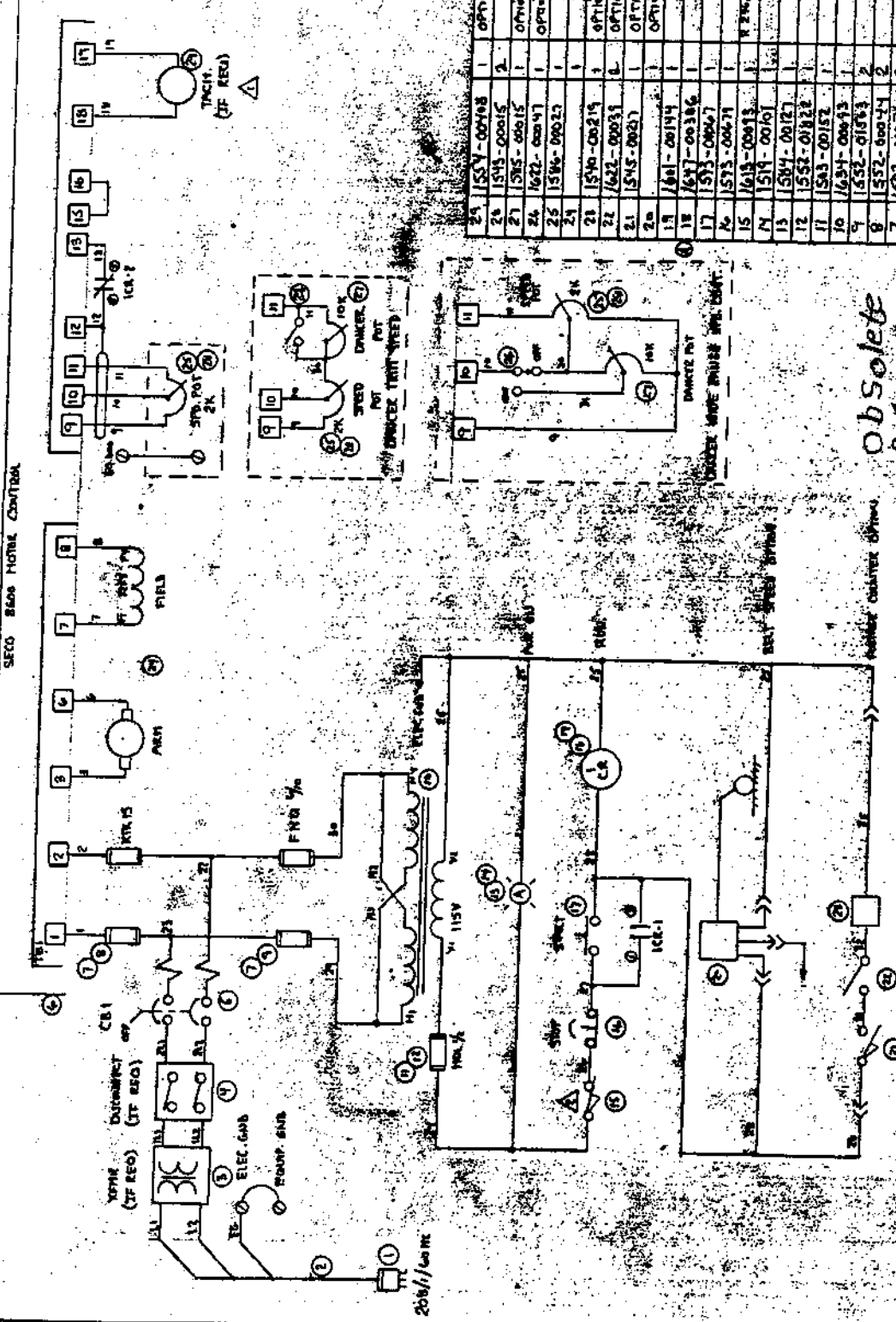
EQUIPMENT PARTS LIST
TO ORDER PARTS CALL TOLL FREE (800) 458-1960

Product:
REV #:
Instruction Manual:

Page 2 of 2

Reference Number	Part Number	Qty	Description
<u>Electrical Control W/ Fenner</u>			
24	1502-00078	2	Fuse Block- Bus
25	1503-00153	1	Fuse Block- Acme
26	1531-01474	1	Control-DC Fenner
27	1552-00044	2	Fuse - Busman
28	20604008	2	Fuse 6/10 Amp Type FNQ
29	1552-01822	1	Fuse - MDL-1/2
30	1593-30032	1	Pushbutton
31	1593-30048	1	Pushbutton
32	1593-30056	1	Pushbutton
33	2504-30656	1	Box - Electrical
34	84318	1	Switch Disconnect
35	1593-30072	1	Pushbutton
36	1551-30000	1	Filter - RFI Corcom Type 2
37	1608-30000	1	Semi Cond. Varistor
<u>Remote Opt.</u>			
38	85243	1	Box - Electrical
39	1593-30272	1	Pushbutton
40	1593-30264	1	Pushbutton
41	CAB-00002	100ft	Cable 16/3 STO
<u>Footage Counter Opt.</u>			
42	1517-30056	1	Cable - 6 Pin and 4 Wire
43	1540-30048	2	Red Lion Cub 50000 RPM
44	1650-30008	1	Power Supply
45	1619-30064	1	Switch Selector 2-Pos.
46	1545-00594	1	Encoder Wheel
47	1545-30104	1	Encoder 100PPR
48	17302403	1	Arm , Aluminum
49	71301811	1	Arm , Bracket
<u>Guard Covers</u>			
50	0101-01369	1	Fiberglass Top Beam
51	0101-01423	1	Fiberglass Back Door
52	0101-01431	1	Fiberglass Rear
53	0101-03248	1	Fiberglass BottomBeam

REV.	DESCRIPTION	DATE	BY	ECN
A	ITEM 2/8 W/17-00041	6/17-00041	EP	



SECO 2500 MOTOR CONTROL

ITEM	PART No.	QTY.	MATERIAL	DESCRIPTION
1	1614-00016	1	PLUG	PLUG
2	1517-00023	15	CABLE	CABLE 3 CWS #1
3	1635-00755	1	DISCONNECT SW.	DISCONNECT SW.
4	1511-00362	1	FUSE	FUSE 1/2" 15
5	1508-00045	1	FUSE	FUSE 1/2" 15
6	1532-00044	2	FUSE	FUSE 1/2" 15
7	1502-00074	2	FUSE	FUSE 1/2" 15
8	1532-00044	2	FUSE	FUSE 1/2" 15
9	1532-00044	2	FUSE	FUSE 1/2" 15
10	1634-00043	1	TRANSFORMER	TRANSFORMER
11	1583-00152	1	FUSE	FUSE 1/2" 15
12	1583-00152	1	FUSE	FUSE 1/2" 15
13	1584-00123	1	FUSE	FUSE 1/2" 15
14	1584-00123	1	FUSE	FUSE 1/2" 15
15	1613-00013	1	LEAK CAP	LEAK CAP
16	1514-00101	1	LIMIT SWITCH	LIMIT SWITCH
17	1573-00071	1	RELAY	RELAY
18	1681-00194	1	RELAY SOCKET	RELAY SOCKET
19	1681-00194	1	RELAY SOCKET	RELAY SOCKET
20	1681-00194	1	RELAY SOCKET	RELAY SOCKET
21	1545-00027	1	SWITCH	SWITCH
22	1622-00031	1	PUSH BUTTON	PUSH BUTTON (STOP)
23	1546-00219	1	PUSH BUTTON	PUSH BUTTON (STOP)
24	1546-00219	1	PUSH BUTTON	PUSH BUTTON (STOP)
25	1546-00219	1	PUSH BUTTON	PUSH BUTTON (STOP)
26	1546-00219	1	PUSH BUTTON	PUSH BUTTON (STOP)
27	1585-00015	2	POT	POT 1/2" 15
28	1585-00015	2	POT	POT 1/2" 15
29	1585-00015	2	POT	POT 1/2" 15
30	1585-00015	2	POT	POT 1/2" 15
31	1585-00015	2	POT	POT 1/2" 15
32	1585-00015	2	POT	POT 1/2" 15
33	1585-00015	2	POT	POT 1/2" 15
34	1585-00015	2	POT	POT 1/2" 15
35	1585-00015	2	POT	POT 1/2" 15
36	1585-00015	2	POT	POT 1/2" 15
37	1585-00015	2	POT	POT 1/2" 15
38	1585-00015	2	POT	POT 1/2" 15
39	1585-00015	2	POT	POT 1/2" 15
40	1585-00015	2	POT	POT 1/2" 15
41	1585-00015	2	POT	POT 1/2" 15
42	1585-00015	2	POT	POT 1/2" 15
43	1585-00015	2	POT	POT 1/2" 15
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45	1585-00015	2	POT	POT 1/2" 15
46	1585-00015	2	POT	POT 1/2" 15
47	1585-00015	2	POT	POT 1/2" 15
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51	1585-00015	2	POT	POT 1/2" 15
52	1585-00015	2	POT	POT 1/2" 15
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54	1585-00015	2	POT	POT 1/2" 15
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65	1585-00015	2	POT	POT 1/2" 15
66	1585-00015	2	POT	POT 1/2" 15
67	1585-00015	2	POT	POT 1/2" 15
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69	1585-00015	2	POT	POT 1/2" 15
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71	1585-00015	2	POT	POT 1/2" 15
72	1585-00015	2	POT	POT 1/2" 15
73	1585-00015	2	POT	POT 1/2" 15
74	1585-00015	2	POT	POT 1/2" 15
75	1585-00015	2	POT	POT 1/2" 15
76	1585-00015	2	POT	POT 1/2" 15
77	1585-00015	2	POT	POT 1/2" 15
78	1585-00015	2	POT	POT 1/2" 15
79	1585-00015	2	POT	POT 1/2" 15
80	1585-00015	2	POT	POT 1/2" 15
81	1585-00015	2	POT	POT 1/2" 15
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83	1585-00015	2	POT	POT 1/2" 15
84	1585-00015	2	POT	POT 1/2" 15
85	1585-00015	2	POT	POT 1/2" 15
86	1585-00015	2	POT	POT 1/2" 15
87	1585-00015	2	POT	POT 1/2" 15
88	1585-00015	2	POT	POT 1/2" 15
89	1585-00015	2	POT	POT 1/2" 15
90	1585-00015	2	POT	POT 1/2" 15
91	1585-00015	2	POT	POT 1/2" 15
92	1585-00015	2	POT	POT 1/2" 15
93	1585-00015	2	POT	POT 1/2" 15
94	1585-00015	2	POT	POT 1/2" 15
95	1585-00015	2	POT	POT 1/2" 15
96	1585-00015	2	POT	POT 1/2" 15
97	1585-00015	2	POT	POT 1/2" 15
98	1585-00015	2	POT	POT 1/2" 15
99	1585-00015	2	POT	POT 1/2" 15
100	1585-00015	2	POT	POT 1/2" 15

Obsolete
But can
Return to
Carabon? Per
6/17/04

△ TACH FEEDBACK IS USED PLACE TACH AER SWITCH TO TACH POSITION
△ LIMIT SWITCH REMOVES THE RING-RTMV FOR 208-4 CONNECT WIRE # 24 TO STOP PUSH BUTTON.