

10

ACCURPRESS

TROUBLESHOOTING



Refer to Section 3, SAFETY prior to any servicing.

All personnel servicing any part of the press brake must follow safe work practices:

- Ensure that all other personnel are clear of the die area (point of operation) while the press brake is being serviced.
- Follow in-plant machine lockout procedures to prevent press brake operation during service or troubleshooting.
- Post equipment maintenance warning signs.
- Utilize proper personal protective equipment as required by regulatory requirements.

Service personnel may require basic diagnostic tools, such as an electrical multimeter for assessing electrical control problems and a pressure gauge for assessing hydraulic problems.

Service personnel using manual overrides on the hydraulic directional valves should proceed with extreme caution to prevent personal injury or damage to the dies, limit switches or hydraulic cylinders, due to overtravel.

Section 10.1 identifies typical malfunctions, their possible causes, and suggested solutions. Section 10.2 discusses instances of forming variance.

10.1 Press Brake Malfunctions

10.1.1 Hydraulic pump drive motor will not start.

Cause	Solution
Shop electrical supply disconnect switch is OFF.	Turn disconnect switch ON.
Press brake main disconnect switch is OFF.	Turn disconnect switch ON.
Emergency STOP pushbutton is pushed in.	Turn Emergency STOP pushbutton 1/4 clockwise to release, then push START pushbutton.
Control circuit fuse FUI is blown.	Check for possible cause. Remedy cause and replace fuse.
Loose wire connections in control circuit wiring.	Check for electrical control wiring continuity using a multimeter and control schematic. Repair as required.

10.1.2 Hydraulic pump drive motor is running but press ram will not cycle.

Cause	Solution
Ram control is disabled. (RAM ACTIVE light is flashing.)	Toggle RAM ENABLE key.
Backgauge control is disabled.	Enable backgauge control.
Control setting is not the mode being used. (Hand or foot light is flashing.)	Change control mode to desired setting.
Neither calibration, run, nor third party control mode are selected.	Select calibration, run or third party control mode.
Ram (Y-axis) is uncalibrated.	Calibrate ram.
Backgauge (X-axis) is uncalibrated.	Calibrate backgauge.
Operational CNC systems interface is incompatible with existing electrical control.	Contact CNC system dealer/manufacturer.
ETS system parameter configuration is incorrect.	Consult factory service for procedures in re-setting system configuration.
Motor rotation is incorrect.	Check phase sequence at main supply voltage connection to disconnect switch. Ensure sequence is: 1-2-3 (red-black-white).
Loose connection/broken wire in operator control pedestal cable or defective electrical contact blocks.	Check for electrical continuity from operator control pedestal to the main electrical cabinet. Repair as appropriate.
Defective ram down overrun limit switch or loose/broken electrical connection.	Check for electrical continuity from the footswitch through to the DOWN solenoids. Repair as appropriate.
Hydraulic relief valve is stuck in OPEN position.	Try to cycle the press ram down using hydraulic valve manual override controls. If no ram motion occurs, remove relief valve cartridge and inspect the O-rings and sliding spools for defects or obstructions.

10.1.3 Press ram will cycle down in slow speed only.

Cause	Solution
Speed change position is not set correctly.	Optimum setting for speed change is at punch contact of part being formed.
High volume valve DOWN solenoid is defective.	Check electrical continuity to and at the solenoid. Repair as appropriate.

10.1.4 Ram hesitates / stops at speed change point or part contact point.

Cause	Solution
Press ram is free falling faster than the system can deliver oil to the hydraulic cylinders.	Check the press ram ways assembly. Refer to 9.3, "Mechanical System Adjustments".
High pressure relief valve is not maintaining preset relief pressure setting.	Remove the high pressure relief cartridge assembly from the manifold block and inspect the O-rings for damage. Check the center sliding spool to confirm valve functionality. Clean with solvent and compressed air to remove any foreign particles. Re-install and test valve.

10.1.5 Press ram will not return to the program up-limit.

Cause	Solution
Control mode is set to JOG.	Switch to AUTO or MAN mode, then activate footswitch or palm pushbuttons.
Loose connection/broken wire in operator control pedestal cable or defective electrical contact block.	Check for electrical continuity from the operator control pedestal through to the up solenoids. Repair as appropriate.
The ram up-limit switch is stuck or damaged in activated position.	Check limit switch mechanical functionality and electrical continuity. Repair as appropriate.

10.1.6 Press ram does not stop at bend point.

Cause	Solution
Hydraulic directional valve malfunction.	Manually activate the overrides to check pilot valve mechanical functionality. Make sure there is no obstruction of the pilot spool or the valve spool centering springs.

10.1.7 Ram stops and/or reverses before developing full tonnage or completing the bend.

Cause	Solution
Program bend point setting is incorrect.	Check program bend point to see if the press ram reaches the recorded position.
Tonnage control is set too low to complete the bend.	Check tonnage display and adjust for higher tonnage.
Excessive off center load is causing torsion safety limit switch activation.	Move part being formed closer to center on the press bed.
Slow speed change position setting is incorrect.	Optimum setting for speed change is at punch contact of part being formed.

10.1.8 Press tonnage display shows full tonnage but the press fails to complete the bend.

Cause	Solution
Part's material properties are incompatible with the press brake and die configuration.	<p>Check material properties to confirm that the bend can be executed with the existing set-up.</p> <p>Increase die opening to reduce the press ram tonnage required to form the part.</p> <p>Decrease part length being formed to reduce the press tonnage required.</p>

10.1.9 Backgauge will not advance to the next flange length step.

Cause	Solution
Incorrect programming of number of steps for the job.	Confirm backgauge program steps reflect the job requirement.
Backgauge position dimension per step is not programmed.	Verify or modify backgauge step program dimension.
STOP pushbutton is detented OFF.	Reset backgauge STOP pushbutton to ON (1/4 turn clockwise).

10.1.10 Hydraulic system is overheating.

Cause	Solution
The program up-limit setting is incorrectly adjusted and the ram up-limit switch is failing. This is allowing cylinders to fully retract, which relieves hydraulic flow over the system relief valve.	Check ram up-limit switch adjustment and functionality to stop ram up travel, and ETS HIGH set position.
Operator is continuously attempting to form parts over the capacity of the press brake.	Ensure the press brake speed change point is above the material to be formed and the tonnage indicator is registering within the rated tonnage.
Hydraulic system high pressure relief valve is relieving prematurely.	Remove the high pressure relief cartridge assembly from the manifold block and examine O-rings for damage. Push the center sliding spool to confirm valve functionality. Clean with solvent and compressed air to remove any foreign particles. Re-install then test valve.
High pressure pump cartridge is defective or worn, resulting in loss of flow and pressure.	Test the pump flow delivery and pressure at a hydraulic service center. If such facilities are not convenient, the high pressure cartridge "P2" can be removed and examined for mechanical damage and wear. Replace the cartridge or the complete pump, as required.
The coupling element between the electric motor and hydraulic pump is worn or disintegrated.	Inspect and replace as required.

10.1.11 Hydraulic pump is noisy.

Cause	Solution
Hydraulic fluid level is low.	Check fluid level when press ram is in up position. If required, add fluid until visible in sight gauge.
Pump inlet suction strainer is plugged or obstructed.	Check fluid condition. Replace hydraulic strainer, fluid and hydraulic filter as required.
Hydraulic inlet piping or connections are loose, causing pump to ingest air.	Check piping connections, O-ring at pump to inlet flange, and tighten inlet flange bolts.
Hydraulic pump shaft seal is defective, causing pump to ingest air.	Check shaft seal for wear or damage. Replace if required.

10.1.12 Operating modes will not toggle to next setting.

Cause	Solution
EDIT selector switch is set to LOCK.	Verify written job operating procedure and modify operating mode for compliance.

10.1.13 ETS or third party CNC gauging is inoperative / malfunctioning.

Cause	Solution
Incorrect CNC gauging interface.	Verify interface documentation and installation. Contact factory service to confirm press brake interface requirements.

10.2 Forming Variance

10.2.1 Unequal angle at each end of formed part.

Cause	Solution
Variance in metal thickness.	Check material thickness at both ends of the part. Offset the ram parallel to compensate for material thickness variance.
Variance in tooling height build-up at each end.	Offset the ram parallel to compensate for any tooling variance.

10.2.2 Inconsistency in formed parts.

Cause	Solution
Press ram, bed and tooling are coated with rust-proofing.	Remove die set, clean all parts with solvent, re-assemble and readjust.
Tooling does not lie flat on press bed cap.	Check clearance with feeler gauges. Shim between press bed and tooling, or mechanically straighten as required.
Tooling is worn.	Remachine forming surfaces of tooling. Utilize localized shimming practices to compensate for worn areas.

10.2.3 Each formed part exhibits a consistent angle from end to end, but there is inconsistency from part to part.

Cause	Solution
Press ram is free falling	Check press ram ways assembly adjustment.
High pressure directional control valve is defective or worn.	Disassemble and inspect for damaged or worn spools landings, spools, springs, or for contaminants.

10.2.4 Each formed part exhibits an inconsistent angle from end to end.

Cause	Solution
Rocker arm clamping screws are loose.	Locate and retorque.
Right ram lug clamping screws are loose.	Locate and retorque.
Left ram lug clamping screws are loose.	Locate and, if loose, consult factory service before retorquing.
Connecting rod clamping screws are loose.	Locate and, if loose, consult factory service before retorquing.
Connecting rod lower spherical bearing is worn or damaged.	Locate and, if loose, consult factory service before retorquing.

10.2.5 Under bending in the middle of the formed part.

Cause	Solution
Tooling is worn in the center due to continuous forming of small parts in one location.	Remachine forming surfaces of tooling. Utilize localized shimming practices to compensate for worn areas.
Press bed and ram are worn in the center due to continuous forming of small parts in one location.	Remachine forming surfaces of press bed and ram. Utilize localized shimming practices to compensate for worn areas.

10.3 ETS Messages

The software includes detailed messages to describe machine operation. One or more messages will be displayed to either explain an error or diagnose a problem.

10.3.1 Error Messages

If the palm pushbuttons or footswitch are activated and there is no motion for two seconds, error message(s) will be displayed. In this case the message(s) will explain the error. Each message has an associated number:

100 series - indicates problems are normally corrected by proper machine setup and operation.

900 series - indicates parts should be replaced, or the machine requires servicing.

The "Explanation/Solution" column gives the most common reasons and/or possible solutions for the message, starting with the most probable.

Number	Message	Explanation / Solution
099	ACR held on by NNN	<p>The number NNN signifies why the Auto-Cycle-Relay remains on at the end of the cycle when the controls have been released.</p> <ol style="list-style-type: none"> 1) Over 16 - two pedestal problem. 2) 12 thru 16 - both palm pushbuttons are sensed on 3) 8 thru 12 - right palm pushbutton is sensed on. 4) 4 thru 8 - left palm pushbutton is sensed on. 5) Under 2 - footswitch is sensed on.
901	Fuse F2 Blown	<ol style="list-style-type: none"> 1) Random failure - replace fuse. 2) Chronic failure = normally indicates a failed solenoid valve.
102	Hydraulics Off	<ol style="list-style-type: none"> 1) Check that the pedestal STOP button is released. 2) If '901' also, replace main PLC board fuse. 3) Check overloads on main contactor. 4) Check for power at J4, G9, G10, J8. 5) Hydraulics safety cutout must be on <ul style="list-style-type: none"> - check that there is no voltage at J6 when the start button is pushed. - if 120V at J6, problem with main PLC board. 6) If pump is running there is a PLC sensor fault, machine operation is not affected.
103	Ramup Activated	<ol style="list-style-type: none"> 1) Ensure that RAM UP is not being pushed. 2) Check for power at G1 <ul style="list-style-type: none"> - if power present, suspect short in snake, pedestal wiring, or RAM UP switch. - if no power, there is a PLC main board problem.
104	Hand Required- Not Foot	<ol style="list-style-type: none"> 1) Check that control mode is correct. 2) Pedestal problem: <ul style="list-style-type: none"> - fault in top contact of footswitch. - break in wiring to pedestal board P1-6. - pedestal board fault (R14).

Number	Message	Explanation / Solution
105	Foot Required - Not Hand	<ol style="list-style-type: none"> 1) Check that control mode is correct 2) Pedestal problem: <ul style="list-style-type: none"> - fault in contact of palm pushbutton. - break in wiring to pedestal board P1-3 or P1-4. - pedestal board fault (R7 or R8).
906	H/FtOn, NoAC Pwr	<ol style="list-style-type: none"> 1) Footswitch not fully depressed. 2) Pedestal logic problem <ul style="list-style-type: none"> - change control modes and error message should change to 104 or 105, follow message instruction. 3) Check for obstruction under footswitch. 4) Check continuity from J4 to G3 with footswitch engaged. 5) Check continuity from J4 to G2 with palm pushbuttons engaged. 6) Check that hand/foot relay (RE2) is 12VDC. 7) Main PLC board has failed (not user replaceable).
107	Down Limit Open	Down limit microswitch is open.
108	Torque LimitOpen	Torque limit microswitch is open.
109	LightCurtainOpen	Light curtain has been activated.
110	3 rd Party DnOpen	3 rd party down limit is open.
111	Not Run-Calib Md	Need to switch to run mode or calibration mode.
112	Ram uncalibrated	Need to calibrate press ram (Y- axis).
113	Ram not enabled	Enable press ram by pressing the RAM ENABLE button.

Number	Message	Explanation / Solution
114	Xaxis off target	<ol style="list-style-type: none"> 1) Wait for backgauge to reach programmed position. 2) Enable the backgauge by pressing the GAUGE ENABLE button. 3) Check for any obstruction of the backgauge. 4) Re-calibrate the backgauge X-axis.
115	Anti-tie-downErr	<ol style="list-style-type: none"> 1) Operate palm pushbuttons simultaneously. 2) Check for switch or wiring error in pedestal.
116	DownLimit Reached	Ram has reached its target position and can go no further. This is not a fault.
117	TonLimit Reached	<ol style="list-style-type: none"> 1) Check that tonnage limit is set properly. 2) Check setting of K factor, or other parameters. 3) Tonnage sensor failure.
118	Retrip RDS/HFT	In either Ram Double-Stop mode or Hand-Foot transfer mode, the hand/foot switch was not released within 2 seconds at the slow speed change point.
119	Retrip ErrBitSet	<p>Press ram will go up with next activation. Ram has stopped as a result of:</p> <ol style="list-style-type: none"> 1) Switched out of JOG mode or changing modes. 2) Ram enabled when not at top of stroke. 3) HI point reduced when hydraulics are on. 4) Any other unauthorized motion.
120	Retrip ACRBit Set	Press ram is prevented from going up at the end of the stroke. Ram will go up with next activation.

10.3.2 Diagnostic Messages

If the palm pushbuttons or footswitch continue to be activated after a press ram cycle is completed, these messages will be displayed. They are used for diagnostic purposes and give the reason why the cycle was terminated.

Number	Message	Solution
121	TonSensorProblem	1) Adjust zero on PLC board. 2) Check ton sensor input wires and connector. 3) Failed ton sensor.
122	Valid Bend Limit	Usually indicates desired operation.
123	Valid Ton Limit	Usually indicates desired operation.
124	Error Ton Cutout	Usually indicates ton limit set too low.
125	Ramup Sw Cutout	Occurs when Ram Up is activated before the bend limit has been reached. Usually this is the operator's intent.
126	Pedestal PwrLoss	Occurs if the hand/foot is de-activated before the ram has reached the bend limit. Usually this is the operator's intent.
127	X axis target loss	Retract must be programmed at least 0.300 from top of stroke.

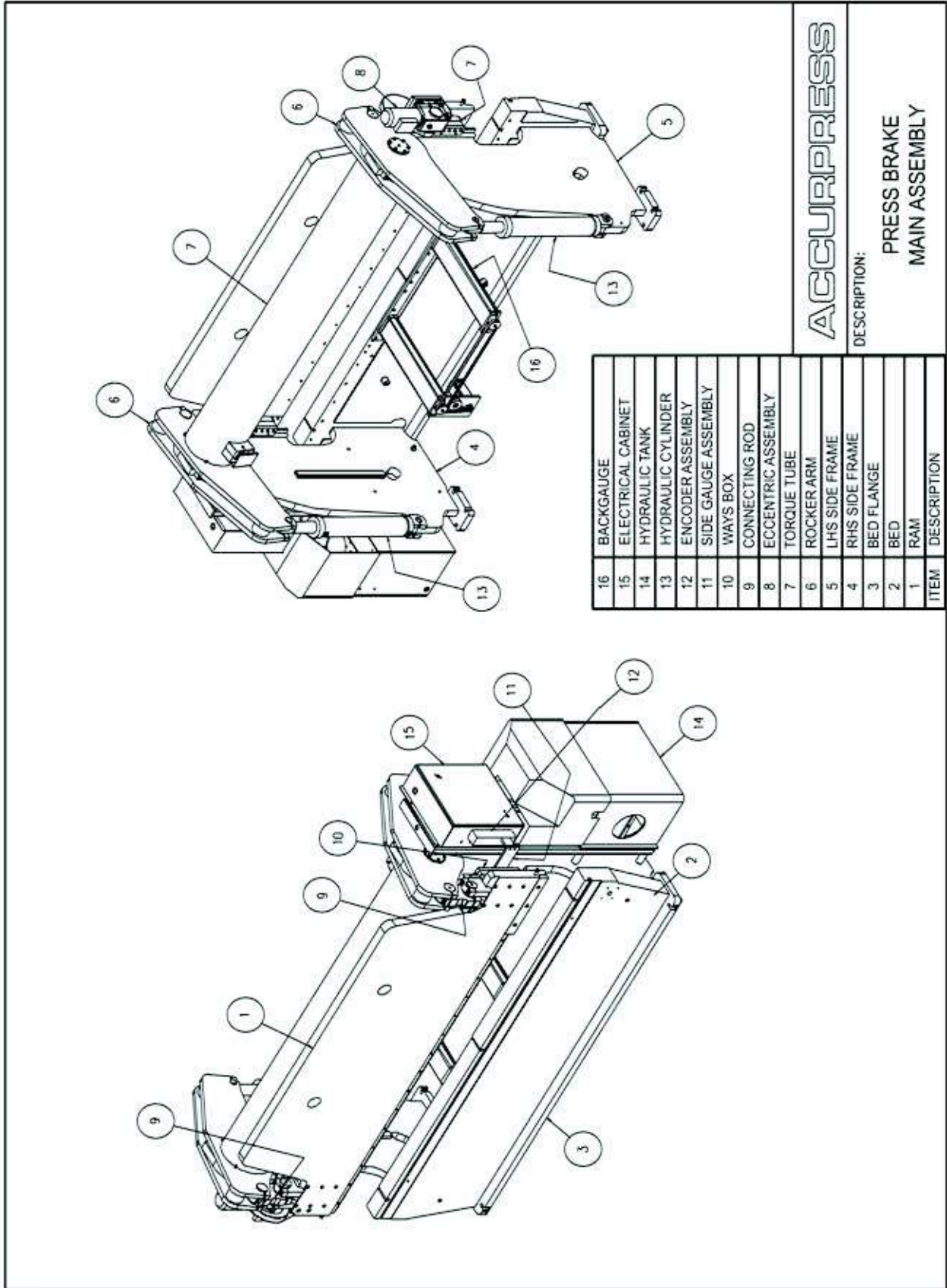

ACCURPRESS


APPENDIX A

PARTS & ASSEMBLIES

A.1	Press Brake Main Assembly	A - 2
A.2	Pivot Points	A - 3
A.3	Ram Assembly	A - 4
A.4	Side Frame Assembly	A - 5
A.5	Eccentric Assembly	A - 6
A.6	Ways Box Assembly	A - 9
A.7	Encoder Assembly	A - 11
A.8	Hydraulic Transmission Assembly	A - 12
A.9	Hydraulic Tank Assembly	A - 15
A.10	Main Hydraulic Manifold Assembly	A - 19
A.12	Main Electrical Cabinet Back Panel Layout	A - 24
A.14	Premium Backgauge Assembly (Optional)	A - 25
A.15	Premium Backgauge Backgauge Finger Assembly (Opt.)	A - 36
A.16	Support Arm Assembly (Optional)	A - 43
A.17	Automatic Sheet Follower (Optional)	A - 44
A.18	Accurcrown Crownable Die Holder (Optional)	A - 50

A.1 Press Brake Main Assembly



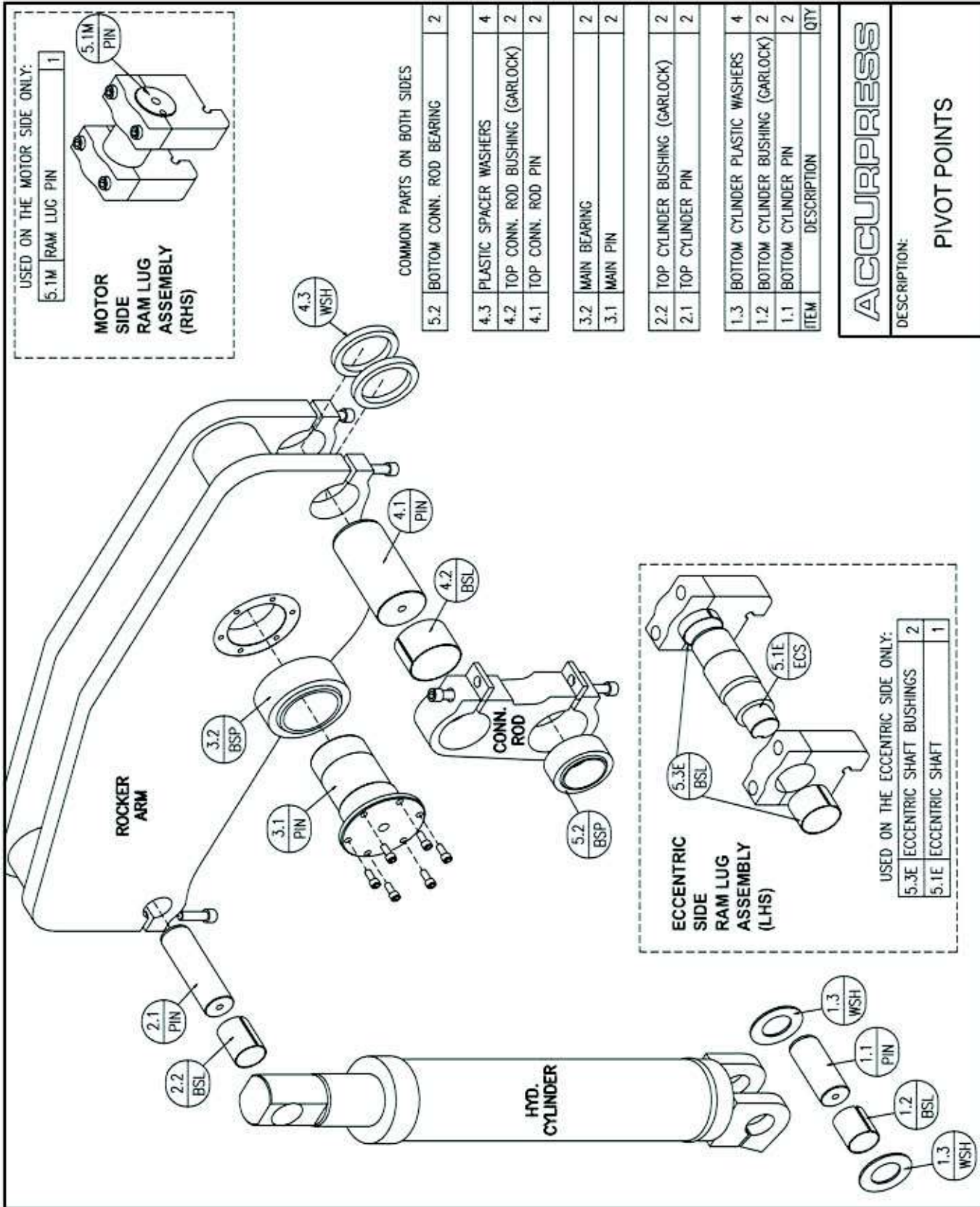
ITEM	DESCRIPTION
16	BACKGAUGE
15	ELECTRICAL CABINET
14	HYDRAULIC TANK
13	HYDRAULIC CYLINDER
12	ENCODER ASSEMBLY
11	SIDE GAUGE ASSEMBLY
10	WAYS BOX
9	CONNECTING ROD
8	ECCENTRIC ASSEMBLY
7	TORQUE TUBE
6	ROCKER ARM
5	LHS SIDE FRAME
4	RHS SIDE FRAME
3	BED FLANGE
2	BED
1	RAM

ACCURPRESS

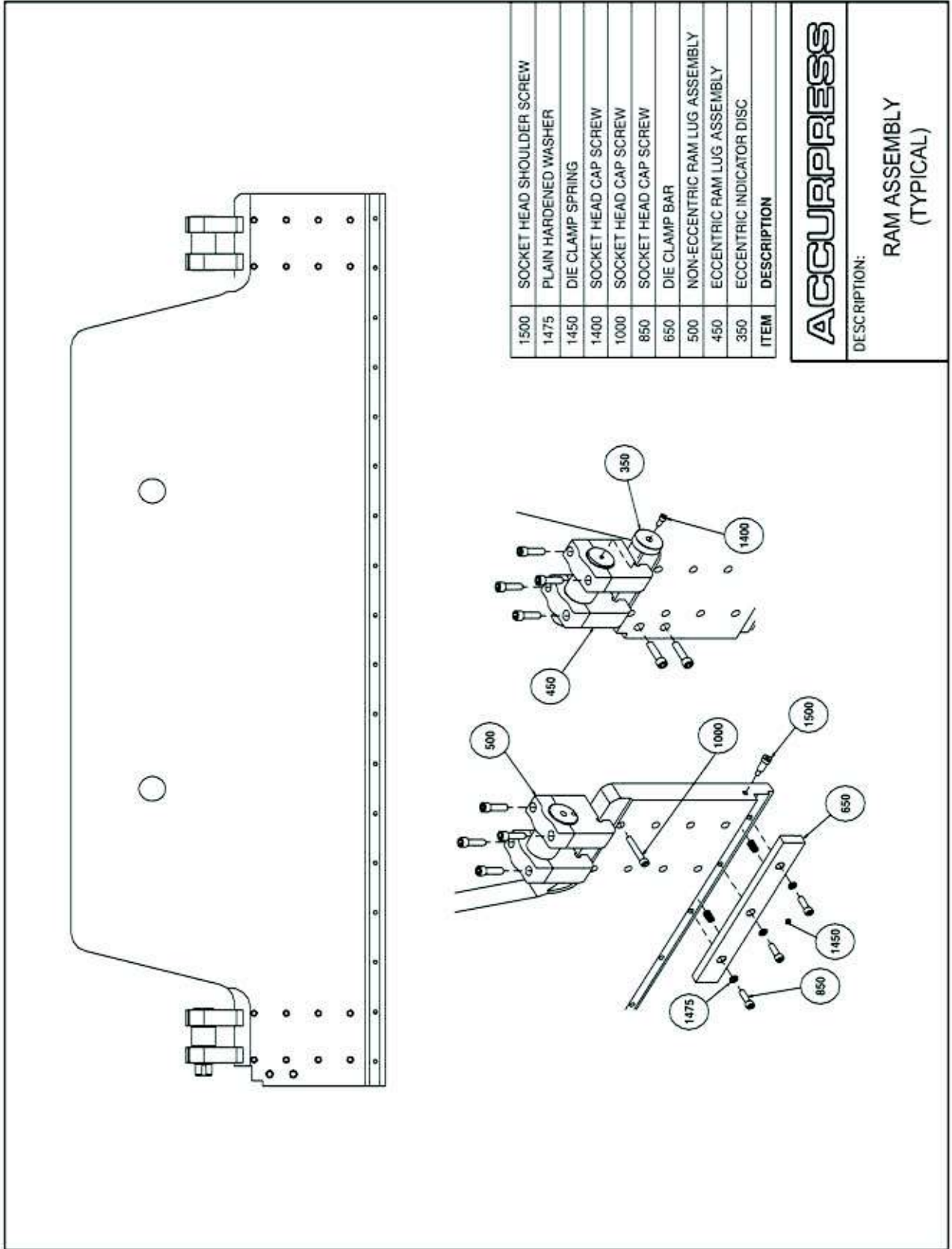
DESCRIPTION:

PRESS BRAKE
MAIN ASSEMBLY

A.2 Pivot Points



A.3 Ram Assembly



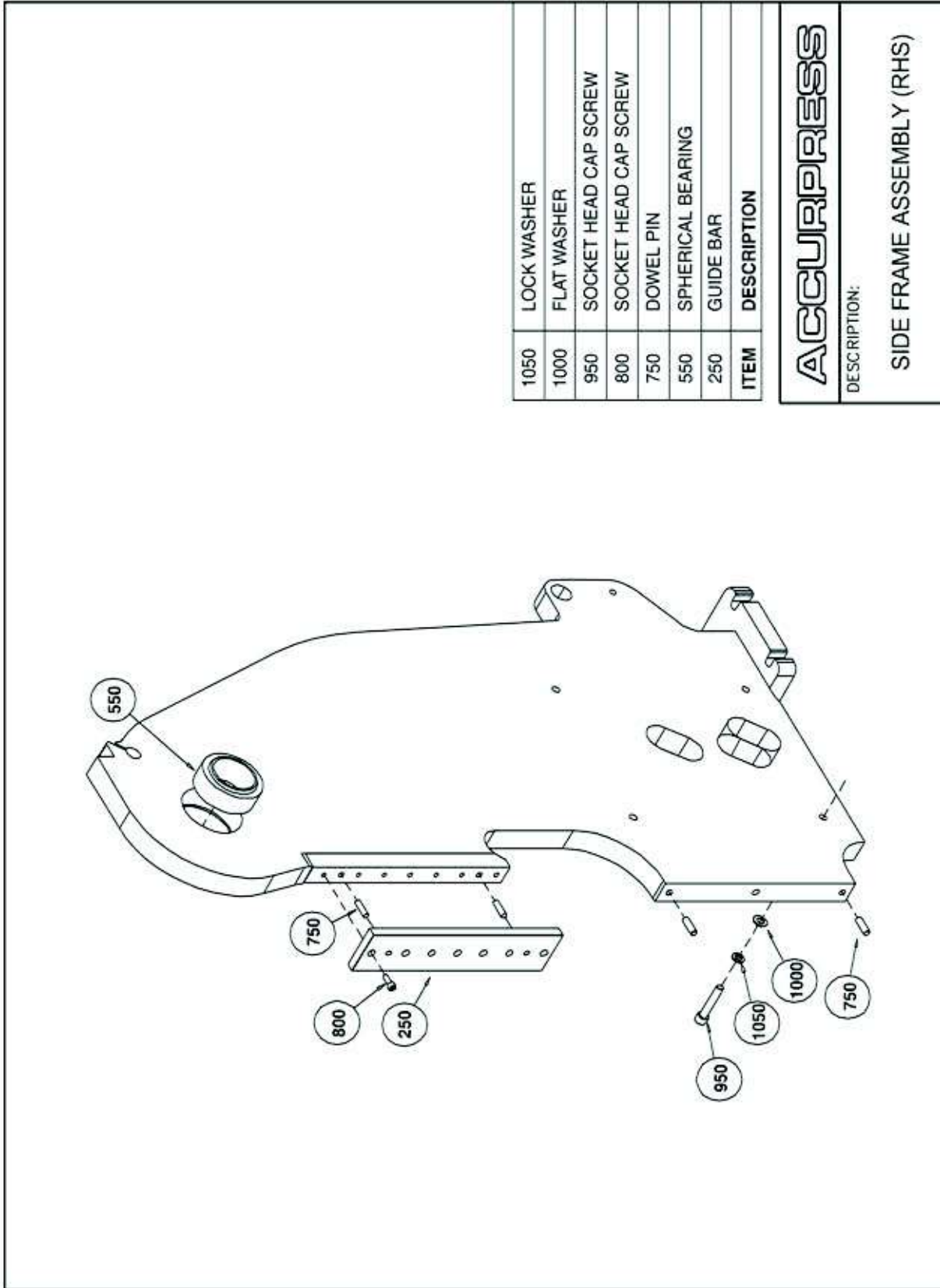
1500	SOCKET HEAD SHOULDER SCREW
1475	PLAIN HARDENED WASHER
1450	DIE CLAMP SPRING
1400	SOCKET HEAD CAP SCREW
1000	SOCKET HEAD CAP SCREW
850	SOCKET HEAD CAP SCREW
650	DIE CLAMP BAR
500	NON-ECCENTRIC RAM LUG ASSEMBLY
450	ECCENTRIC RAM LUG ASSEMBLY
350	ECCENTRIC INDICATOR DISC
ITEM	DESCRIPTION

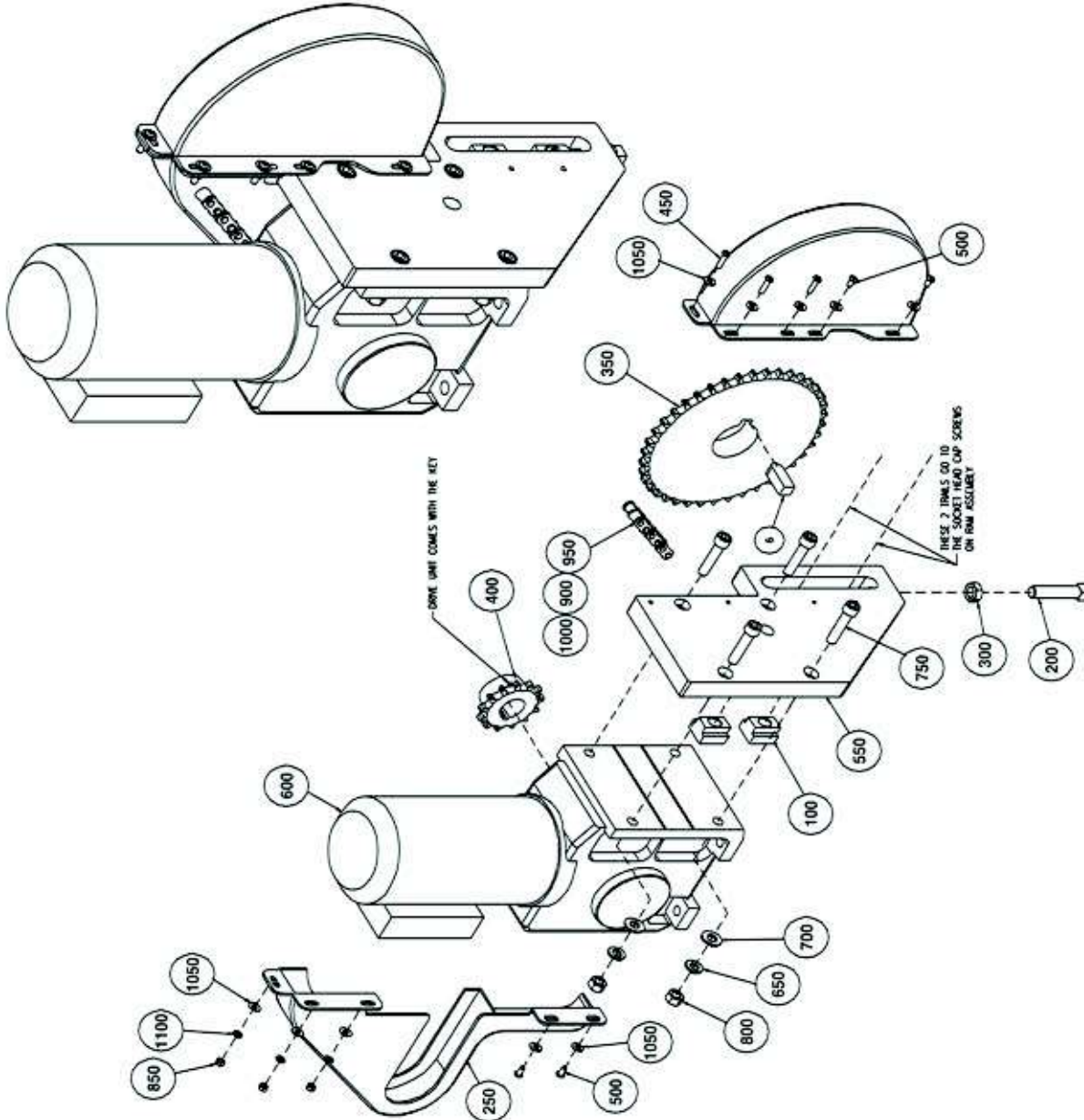
ACCURPRESS

DESCRIPTION:

RAM ASSEMBLY
(TYPICAL)

A.4 Side Frame Assembly



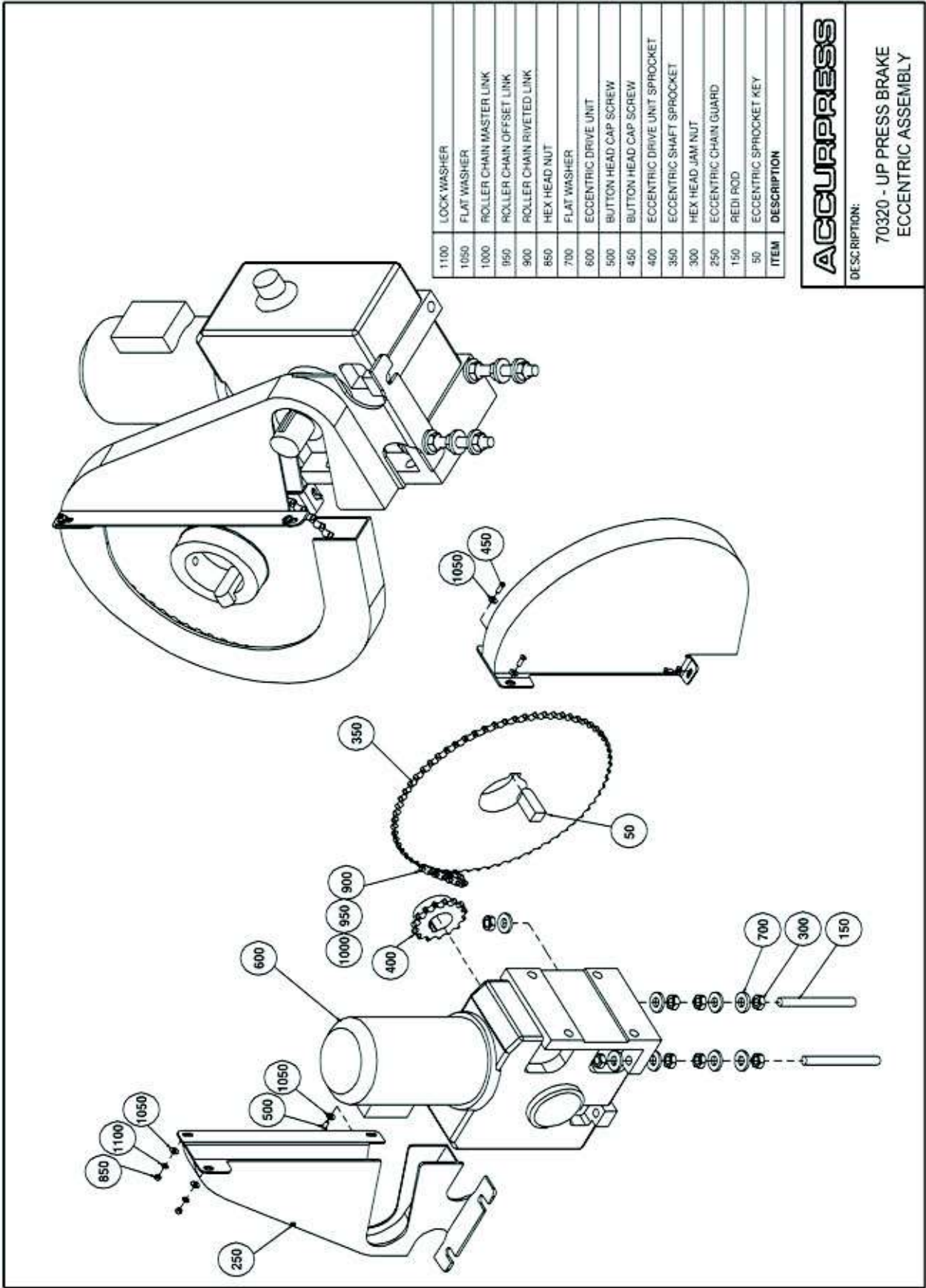


1100	0.250 LOCK WASHER
1050	0.250 FLAT WASHER
1000	ROLLER CHAIN OFFSET LINK
950	ROLLER CHAIN MASTER LINK
900	ROLLER CHAIN RIVETED LINK
850	HEX HEAD NUT
800	HEX HEAD NUT
750	SOCKET HEAD CAP SCREW
700	0.500 FLAT WASHER
650	0.500 LOCK WASHER
600	ECCENTRIC DRIVE UNIT
550	ECCENTRIC UNIT MOUNT
500	BUTTON HEAD CAP SCREW
450	BUTTON HEAD CAP SCREW
400	ECCENTRIC DRIVE UNIT SHAFT
350	ECCENTRIC SHAFT SPROCKET
300	HEX HEAD JAM NUT
250	ECCENTRIC CHAIN GUARD
200	SQUARE HEAD SCREW
100	T-SLOT NUT
50	ECCENTRIC SPROCKET KEY
ITEM	DESCRIPTION

ACCURPRESS

DESCRIPTION:

70175 - 70250 PRESS BRAKE
ECCENTRIC ASSEMBLY



ACCURPRESS

DESCRIPTION:

70320 - UP PRESS BRAKE
ECCENTRIC ASSEMBLY

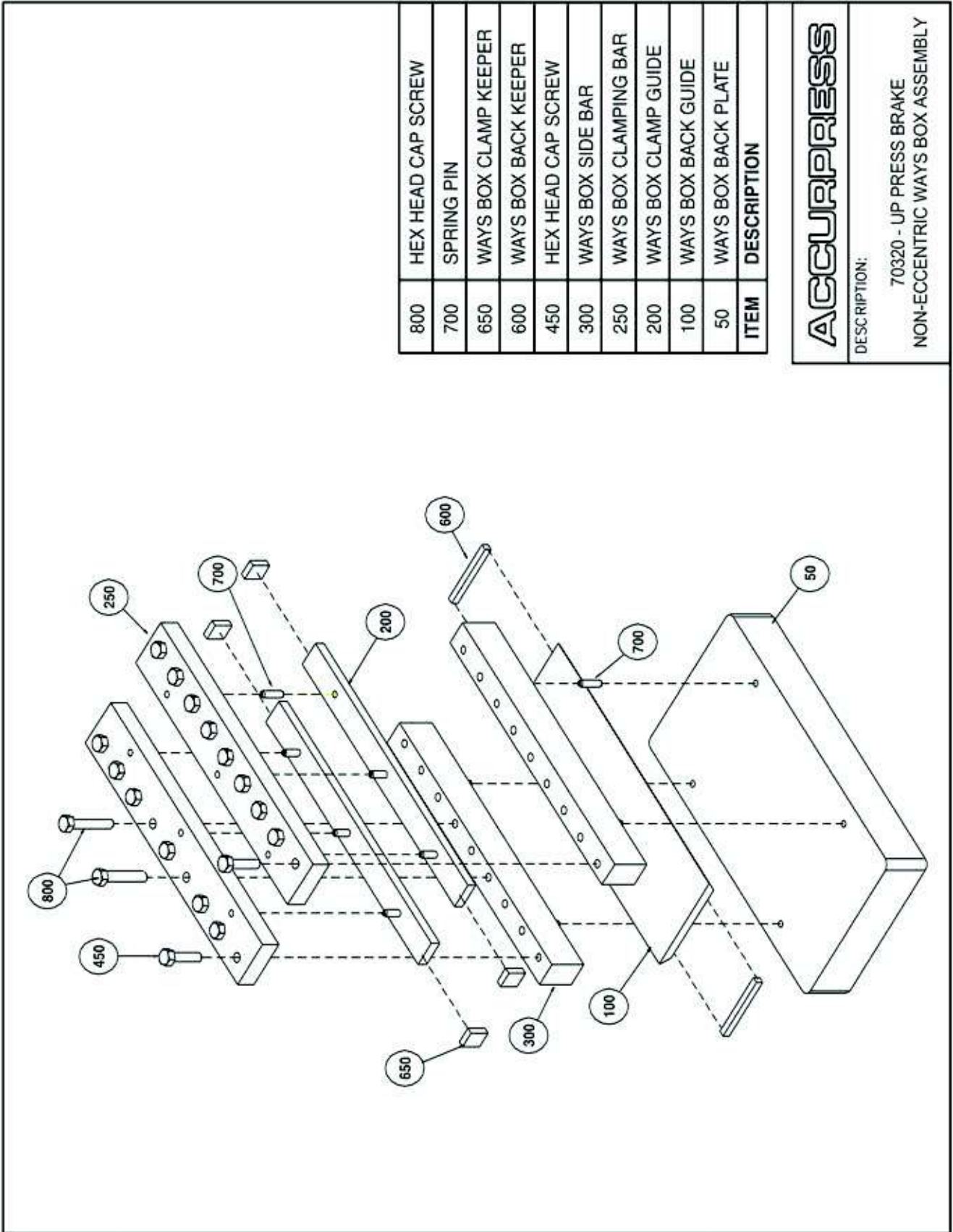
A.6 Ways Box Assembly

WAYS BOX PLASTIC SET (PWA66061) = 1 PLASTIC BACK GUIDE + 1 OUTER PLASTIC + 2 PLASTIC CLAMP GUIDES

9	NUT26442	SELF LOCKING NYLOK NUT	4
8	WSH25226	FLAT WASHER	4
7	WCB25150	CAST ALUMINUM CLAMP	2
6	SHM51959	ALUMINUM SHIM	2
5	WCG25166	PLASTIC CLAMP GUIDE	2
4	WOG26563	OUTER PLASTIC	1
3	WBP52211	BACKING PLATE WITH PLASTIC BACK GUIDE	1
2	SON25224	SQUARE NUT	2
1	HHC25227	HEX HEAD CAP SCREW	4
ITEM	PART #	DESCRIPTION	QTY.

ACCURPRESS

DESCRIPTION:
70060 - 70250 PRESS BRAKE
MODULAR ALUMINUM WAYS BOX ASSEMBLY



800	HEX HEAD CAP SCREW
700	SPRING PIN
650	WAYS BOX CLAMP KEEPER
600	WAYS BOX BACK KEEPER
450	HEX HEAD CAP SCREW
300	WAYS BOX SIDE BAR
250	WAYS BOX CLAMPING BAR
200	WAYS BOX CLAMP GUIDE
100	WAYS BOX BACK GUIDE
50	WAYS BOX BACK PLATE
ITEM	DESCRIPTION

ACCURPRESS

DESCRIPTION:

70320 - UP PRESS BRAKE
NON-ECCENTRIC WAYS BOX ASSEMBLY

A.7 Encoder Assembly

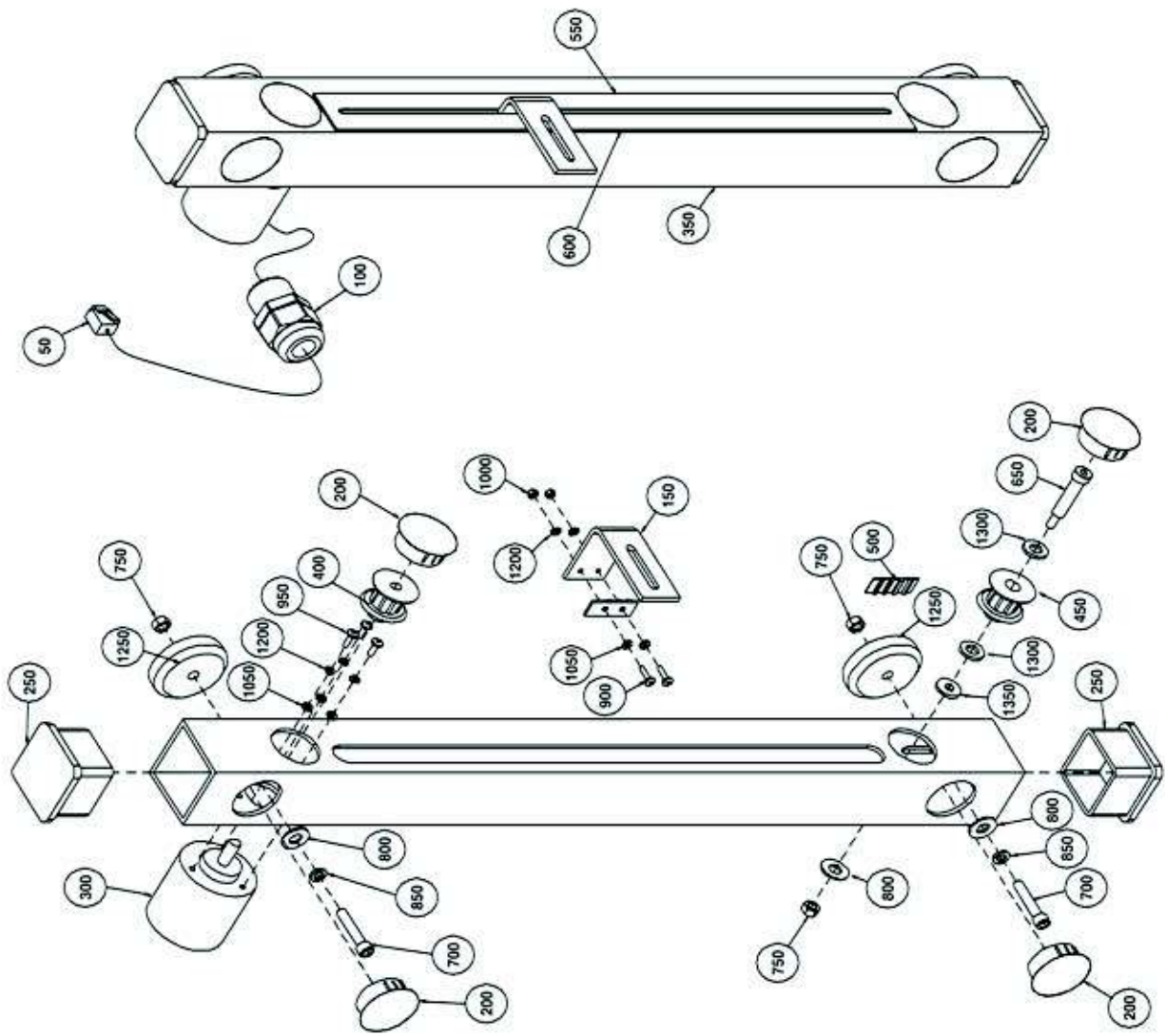
70060-70750 PRESS BRAKE = 08" STROKE ASSEMBLY
 70320-70500 PRESS BRAKE = 10" STROKE ASSEMBLY
 70600-70750 PRESS BRAKE = 12" STROKE ASSEMBLY
 71000-71500 PRESS BRAKE = 14" STROKE ASSEMBLY

1350	BOKERS FLAT WASHER
1300	NYLON "CORDS" WASHER
1250	STAND-OFF
1200	LOCK WASHER
1050	FLAT WASHER
1000	HEX HEAD NUT
950	PHILIPS PAN HEAD SCREW
900	PHILIPS PAN HEAD SCREW
850	LOCK WASHER
800	FLAT WASHER
750	HEX HEAD NUT
700	SOCKET HEAD CAP SCREW
650	SOCKET HEAD SHOULDER SCREW
600	LIP SEAL ADHESIVE
550	LIP SEAL
500	GEAR BELT
450	GEAR BELT PULLEY (DRIVEN)
400	GEAR BELT PULLEY (DRIVE)
350	ENCODER TUBE
300	ROTARY ENCODER
250	SQUARE END PLUG
200	DOME END PLUG
150	STANDARD ENCODER DRAG LINK
100	STRAIN RELIEF CONNECTOR
50	6 PINS PHONE CONNECTOR
ITEM	DESCRIPTION

ACCURPRESS

DESCRIPTION:

RAM ENCODER ASSEMBLY

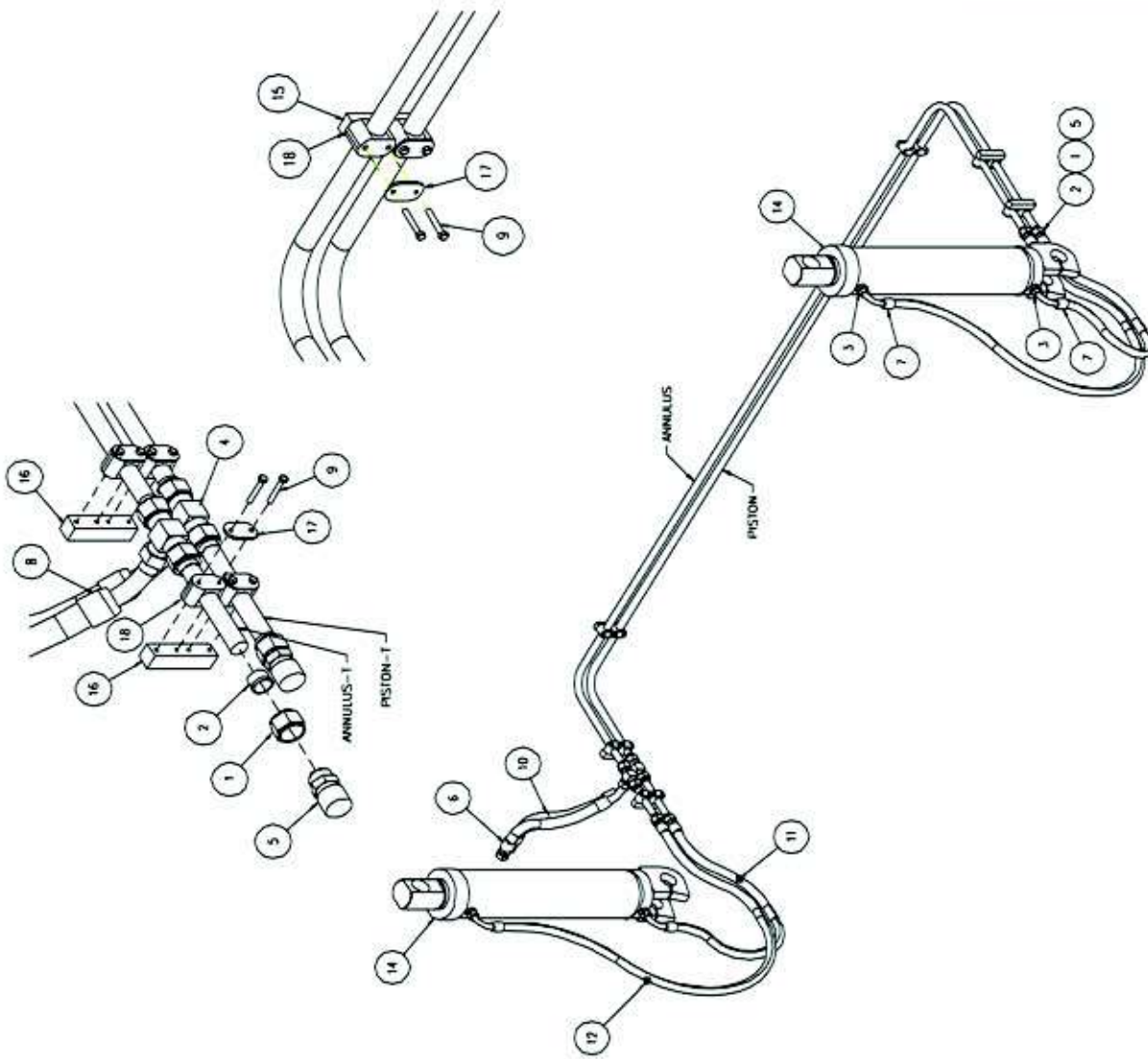


A.8 Hydraulic Transmission Assembly

20	FITTING, COMMON
19	BOTTOM CYLINDER PIN
18	BUSHING
17	TUBE CLAMP
16	TUBE CLAMP COVER
15	TUBE CLAMP BRACKET
14	CYLINDER
13	TUBE SET
12	HOSE, RAW MATERIAL
11	HOSE, RAW MATERIAL
10	HOSE, RAW MATERIAL
9	HEX HEAD CAP SCREW
8	FITTING, HYDRAULIC MANIFOLD
7	FITTING, HOSE END
6	FITTING, HOSE END
5	FITTING, HOSE END
4	FITTING, COMMON
3	FITTING, COMMON
2	FITTING, SLEEVE
1	FITTING, FLARED STYLE "B" NUT
ITEM	DESCRIPTION

ACCURPRESS

DESCRIPTION:
70060 - 70130 PRESS BRAKE
HYDRAULIC TRANSMISSION ASSEMBLY



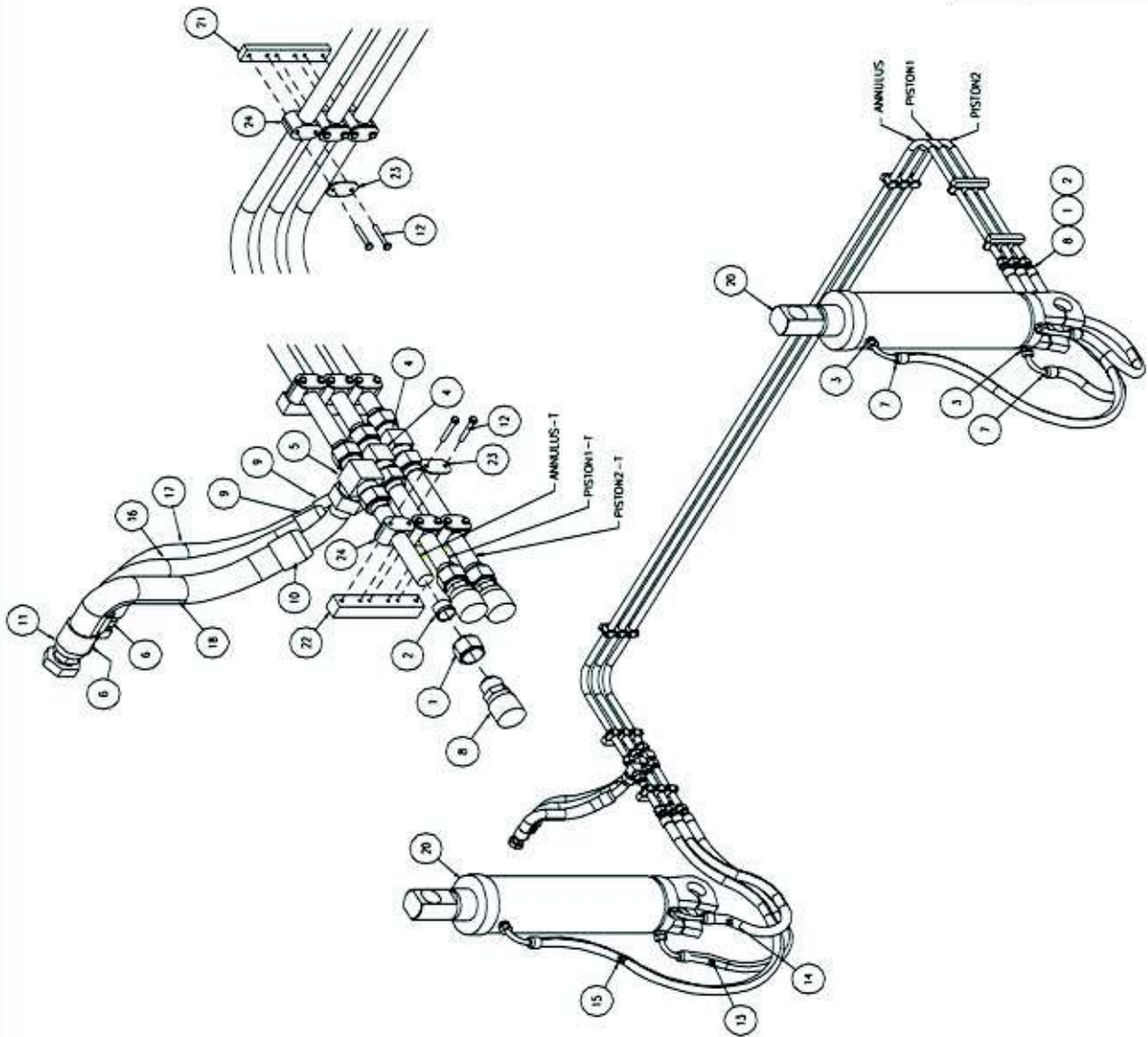
18	TUBE CLAMP
17	TUBE CLAMP COVER
16	TUBE CLAMP BRACKET
15	TUBE CLAMP BRACKET
14	CYLINDER
13	TUBE SET
12	HOSE, RAW MATERIAL
11	HOSE, RAW MATERIAL
10	HOSE, RAW MATERIAL
9	HEX HEAD CAP SCREW
8	FITTING,HOSE END
7	FITTING,HOSE END
6	FITTING,HOSE END
5	FITTING,HOSE END
4	FITTING,COMMON
3	FITTING,COMMON
2	FITTING,SLEEVE
1	FITTING,FLARED STYLE "B" NUT
ITEM	DESCRIPTION

ACCURPRESS

DESCRIPTION:

70175 - 70320 (STD) PRESS BRAKE
HYDRAULIC TRANSMISSION ASSEMBLY

24	TUBE CLAMP
23	TUBE CLAMP COVER
22	TUBE CLAMP BRACKET
21	TUBE CLAMP BRACKET
20	CYLINDER
19	TUBE SET
18	HOSE, RAW MATERIAL
17	HOSE, RAW MATERIAL
16	HOSE, RAW MATERIAL
15	HOSE, RAW MATERIAL
14	HOSE, RAW MATERIAL
13	HOSE, RAW MATERIAL
12	HEX HEAD CAP SCREW
11	FITTING, HOSE END
10	FITTING, HOSE END
9	FITTING, HOSE END
8	FITTING, HOSE END
7	FITTING, HOSE END
6	FITTING, HOSE END
5	FITTING, COMMON
4	FITTING, COMMON
3	FITTING, COMMON
2	FITTING, SLEEVE
1	FITTING, FLARED STYLE "B" NUT
ITEM	DESCRIPTION

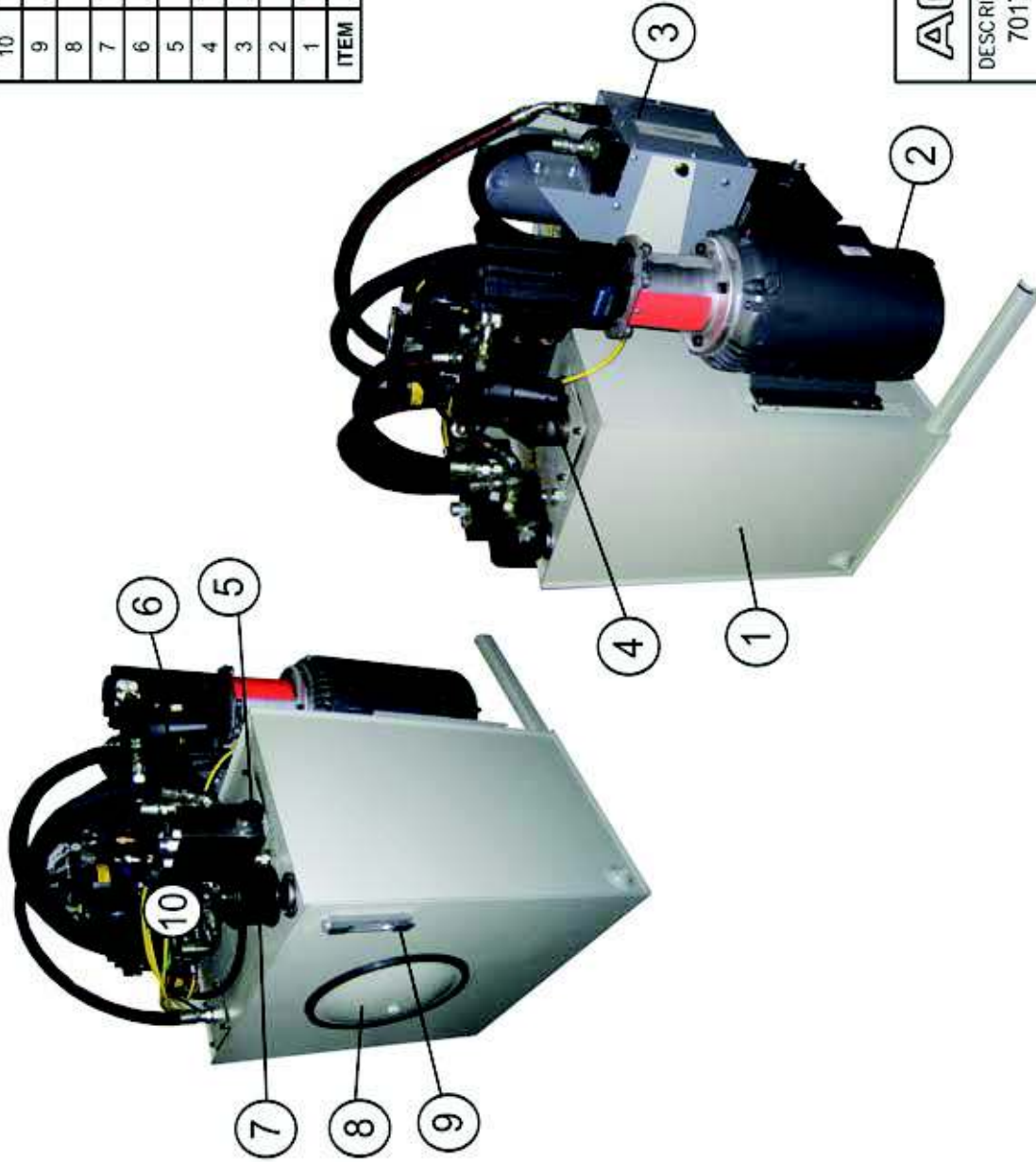


ACCURPRESS

DESCRIPTION:

70320 (HIGH SPD) - UP PRESS BRAKE
HYDRAULIC TRANSMISSION ASSEMBLY

10	20-30 HP STANDARD MANIFOLD
9	HYDRAULIC FLUID LEVEL GAUGE
8	RESERVOIR CLEANOUT ACCESS PLATE
7	RESERVOIR BREATHER FILTER
6	HYDRAULIC PUMP
5	ADJUSTABLE BEND SPEED CONTROL
4	HP HYDRAULIC FILTER
3	OIL COOLER
2	ELECTRIC DRIVE MOTOR
1	HYDRAULIC RESERVOIR
ITEM	DESCRIPTION

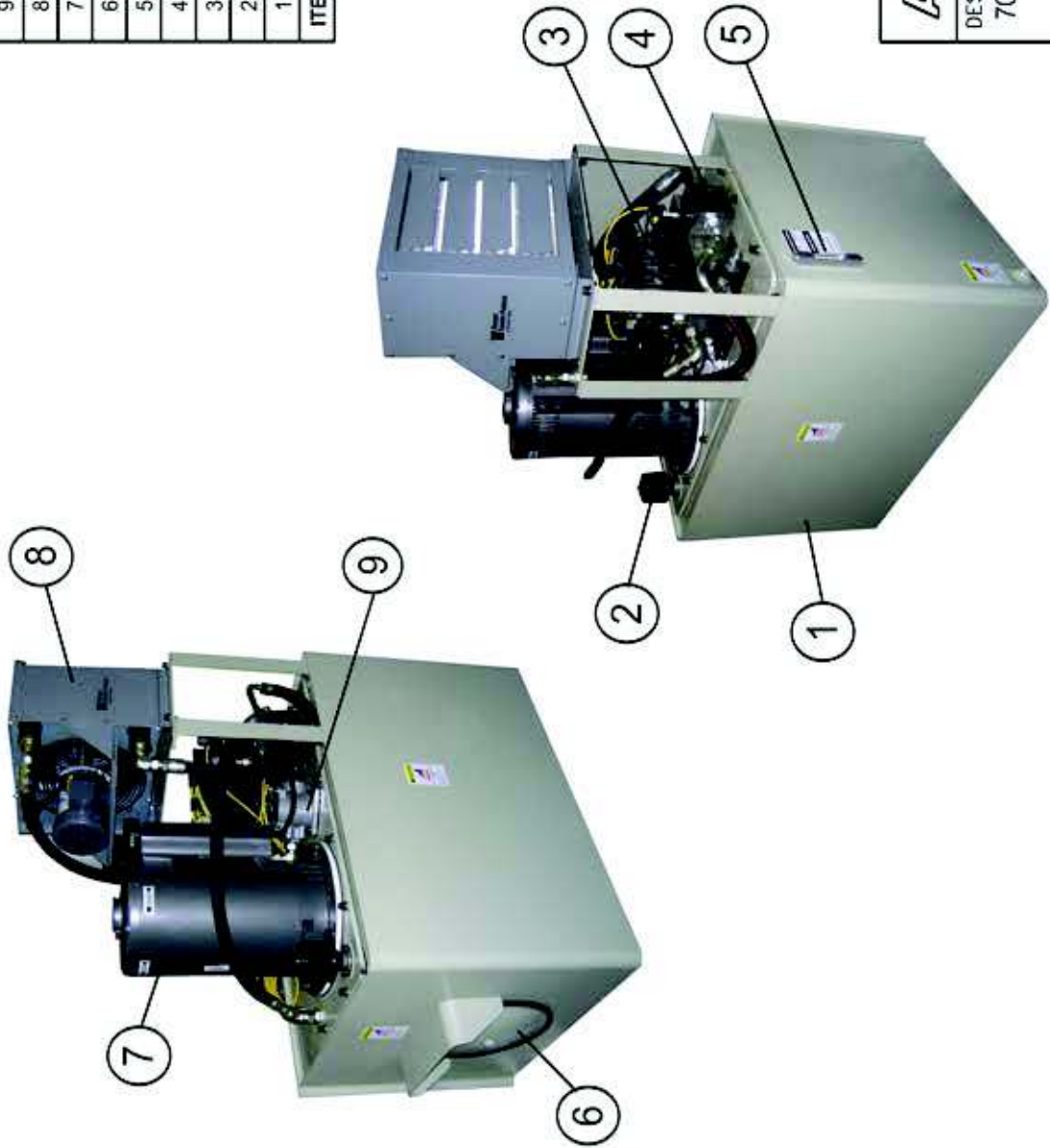


ACCURPRESS

DESCRIPTION:

70175 - 70320 (STD) PRESS BRAKE
 20 - 30 HP HYDRAULIC
 RESERVOIR ASSEMBLY

ITEM	DESCRIPTION
9	HYDRAULIC RETURN LINE FILTER
8	OIL COOLER
7	ELECTRIC DRIVE MOTOR
6	RESERVOIR CLEANOUT ACCESS PLATE
5	HYDRAULIC FLUID LEVEL GAUGE
4	COUNTER BALANCE VALVE MANIFOLD
3	MAIN HYDRAULIC MANIFOLD
2	RESERVOIR BREATHER FILTER
1	HYDRAULIC RESERVOIR



ACCURPRESS

DESCRIPTION:
 70320 (HIGH SPD) - UP PRESS BRAKE
 40 - 75 HP HYDRAULIC
 RESERVOIR ASSEMBLY

A.10 Main Hydraulic Manifold Assembly

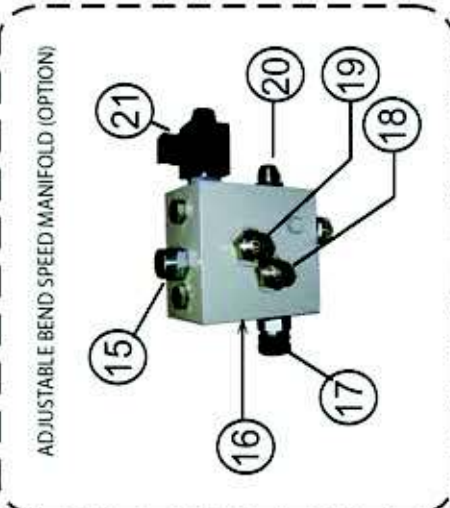
15	FLOW DIVIDER
14	PRESSURE TRANSDUCER
13	RELIEF VALVE
12	PUMP FEEDBACK
11	MAIN PRESSURE
10	PRESSURE FILTER RESTRICTION INDICATOR
9	SPEED CONTROL
8	COMPRESSION 2 VALVE
7	COMPRESSION 1 VALVE
6	10-15 HP MANIFOLD
5	HIGH VOLUME VALVE
4	HIGH VOLUME VALVE
3	HIGH PRESSURE PROPORTIONAL VALVE
2	HIGH PRESSURE FILTER
1	SAFETY VALVE
ITEM	DESCRIPTION

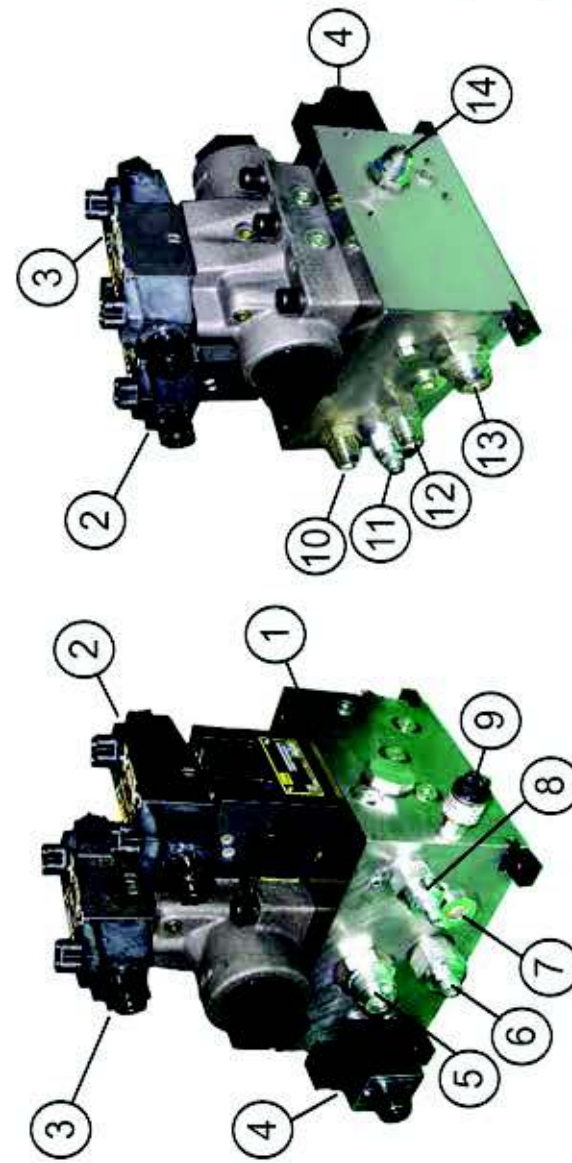
ACCURPRESS

DESCRIPTION:
10 -15 HP ADVANTAGE
HYDRAULIC MANIFOLD

21	ENABLE SOLENOID
20	HP-IN
19	HP-OUT
18	DRAIN PORT
17	NEEDLE VALVE (FLOW CONTROL)
16	ADJUSTABLE BEND SPEED MANIFOLD
15	PRIORITY VALVE CARTRIDGE
14	PISTON PORT
13	ANNULUS PORT
12	COOLER PORT
11	COOLER RELIEF
10	HIGH PRESSURE IN
9	PRESSURE TRANSDUCER
8	HIGH PRESSURE RELIEF
7	ADJUSTABLE BEND SPEED DRAIN PORT
6	HIGH VOLUME RELIEF
5	HIGH VOLUME IN
4	DECOMPRESSION VALVE
3	HIGH VOLUME DIRECTIONAL VALVE
2	HIGH PRESSURE DIRECTIONAL VALVE
1	20-30 HP STANDARD MANIFOLD
ITEM	DESCRIPTION

ADJUSTABLE BEND SPEED MANIFOLD (OPTION)





ACCURPRESS

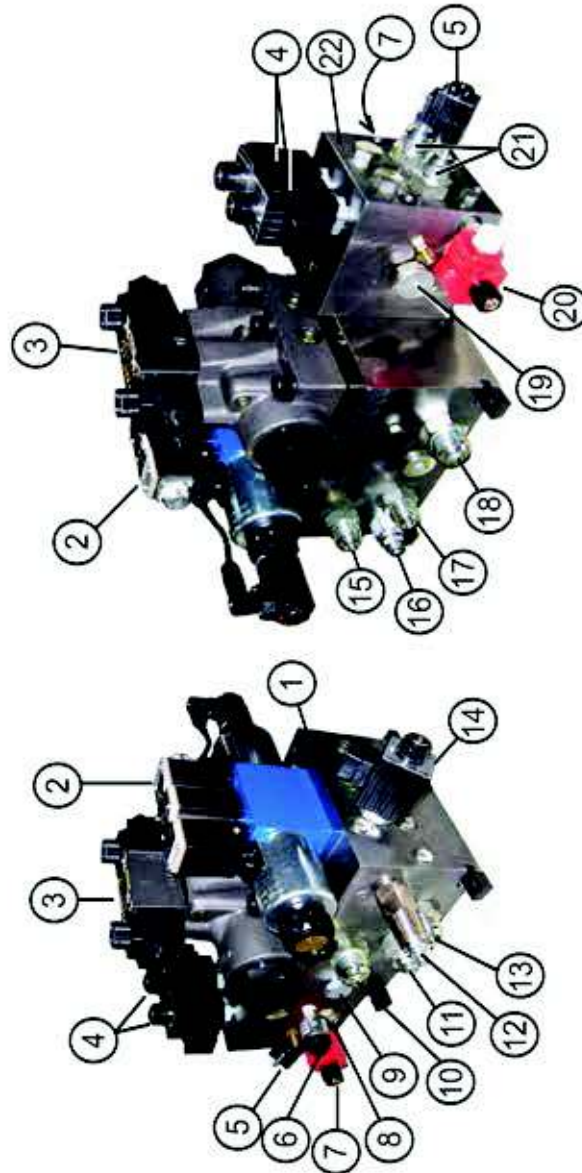
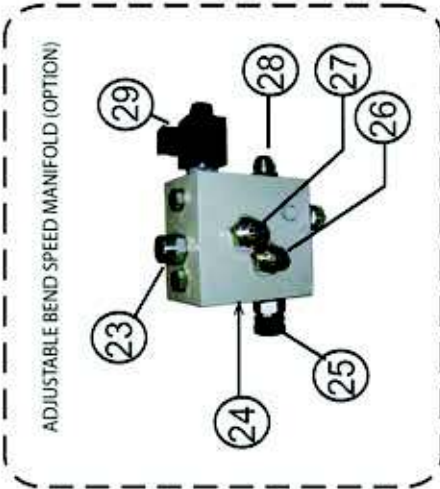
DESCRIPTION:
20 -30 HP STANDARD
HYDRAULIC MANIFOLD

29	ENABLE SOLENOID
28	HP-IN
27	HP-OUT
26	DRAIN PORT
25	NEEDLE VALVE (FLOW CONTROL)
24	ADJUSTABLE BEND SPEED MANIFOLD
23	PRIORITY VALVE CARTRIDGE
22	DUAL RAM FEEDBACK MANIFOLD
21	PISTON PORTS
20	DRF PROPORTIONAL VALVE (SG. SIDE)
19	FLOW DIVIDER SPOOL CARTRIDGE
18	ANNULUS PORT
17	COOLER PORT
16	COOLER RELIEF
15	HIGH PRESSURE IN
14	SAFETY VALVE
13	HIGH PRESSURE IN
12	HIGH PRESSURE RELIEF
11	HIGH VOLUME RELIEF
10	HIGH VOLUME IN
9	PRESSURE TEST PORT
8	SHUTTLE VALVE
7	DRF PROPORTIONAL VALVE (ECC. SIDE)
6	PRESSURE TRANSDUCER
5	FLOW DIVIDER BALANCE VALVE
4	ISOLATION VALVES
3	HIGH VOLUME DIRECTIONAL VALVE
2	HIGH PRESSURE DIRECTIONAL VALVE
1	20-30 HP STANDARD MANIFOLD
ITEM	DESCRIPTION

ACCURPRESS

DESCRIPTION:

20 -30 HP STANDARD HYDRAULIC
MANIFOLD WITH OPTIONAL
ADVANTAGE (DRF) MANIFOLD



33	ENABLE SOLENOID
32	HP-IN
31	HP-OUT
30	DRAIN PORT
29	NEEDLE VALVE (FLOW CONTROL)
28	ADJUSTABLE BEND SPEED MANIFOLD
27	PRIORITY VALVE CARTRIDGE
26	PISTON PORT
25	ANNULUS PORT
24	COOLER PORT
23	COOLER RELIEF
22	PRESSURE TEST PORT
21	ACCUMULATOR
20	40 BAR PRESSURE SWITCH
19	30 BAR PRESSURE SWITCH
18	RAM CLAMP MANIFOLD
17	HIGH PRESSURE IN
16	60 BAR RELIEF
15	PRESSURE REDUCING VALVE
14	HOLDING VALVE - RELIEF (UNDER MANI.)
13	CLAMP PRESSURE OUT
12	CHECK VALVE
11	PRESSURE ON CLAMP SOLENOID
10	PRESSURE TRANSDUCER
9	RAM CLAMP RELEASE SOLENOID
8	HIGH PRESSURE RELIEF
7	ADJUSTABLE BEND SPEED DRAIN
6	HIGH VOLUME RELIEF
5	HIGH VOLUME IN
4	PRESSURE TEST PORT
3	SAFETY VALVE
2	HIGH VOLUME DIRECTIONAL VALVE
1	HIGH PRESSURE DIRECTIONAL VALVE
ITEM	DESCRIPTION

ADJUSTABLE BEND SPEED MANIFOLD (OPTION)

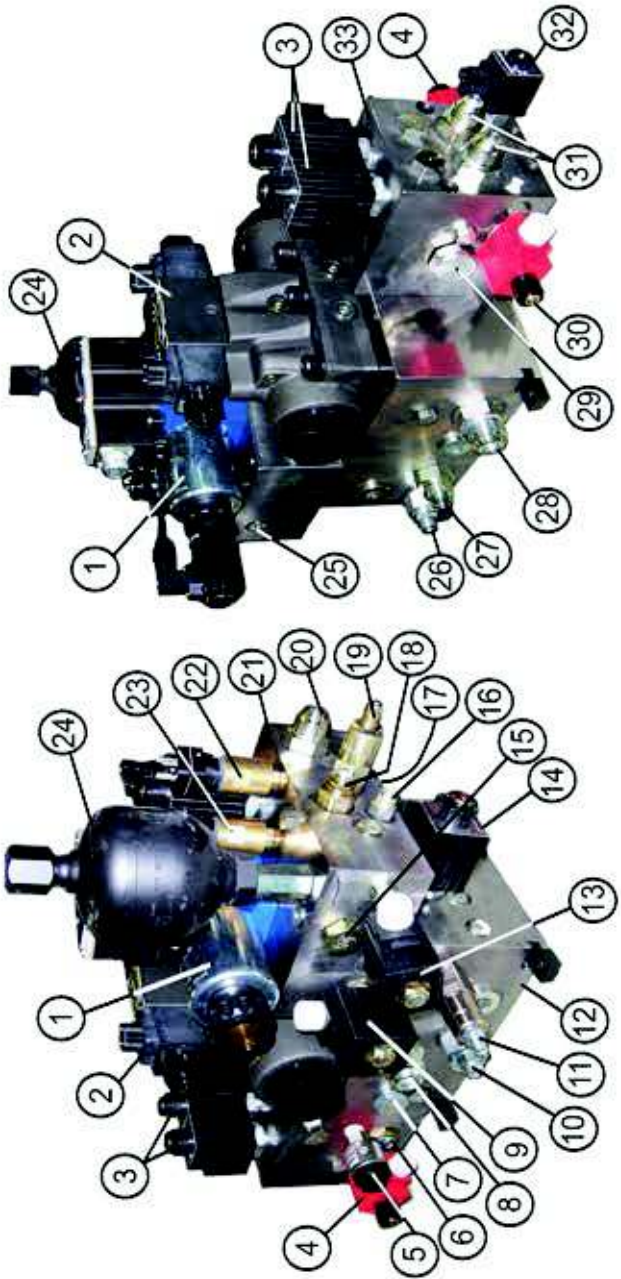
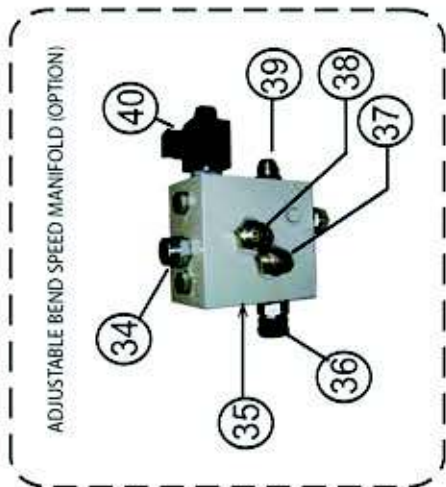
ACCURPRESS

DESCRIPTION:
 20 -30 HP STANDARD HYDRAULIC
 MANIFOLD WITH OPTIONAL
 RAM CLAMP MANIFOLD

40	ENABLE SOLENOID
39	HP-IN
38	HP-OUT
37	DRAIN PORT
36	NEEDLE VALVE (FLOW CONTROL)
35	ADJUSTABLE BEND SPEED MANIFOLD
34	PRIORITY VALVE CARTRIDGE
33	DUAL RAM FEEDBACK MANIFOLD
32	FLOW DIVIDER BALANCE VALVE
31	PISTON PORTS
30	DRF-PROPORTIONAL VALVE (SG. SIDE)
29	FLOW DIVIDER SPOOL CARTRIDGE
28	ANNULUS PORT
27	COOLER PORT
26	COOLER RELIEF
25	PRESSURE TEST PORT
24	ACCUMULATOR
23	30 BAR PRESSURE SWITCH
22	40 BAR PRESSURE SWITCH
21	RAM CLAMP MANIFOLD
20	HIGH PRESSURE IN
19	60 BAR RELIEF
18	PRESSURE REDUCING VALVE
17	HOLDING VALVE - RELIEF (UNDER MANI.)
16	CLAMP PRESSURE OUT
15	CHECK VALVE
14	SAFETY VALVE
13	PRESSURE ON CLAMP SOLENOID
12	20-30 HP STANDARD MANIFOLD
11	HIGH PRESSURE RELIEF
10	HIGH VOLUME RELIEF
9	RAM CLAMP RELEASE SOLENOID
8	HIGH VOLUME IN
7	PRESSURE TEST PORT
6	SHUTTLE VALVE
5	PRESSURE TRANSDUCER
4	DRF PROPORTIONAL VALVE (ECC. SIDE)
3	ISOLATION VALVES
2	HIGH VOLUME DIRECTIONAL VALVE
1	HIGH PRESSURE DIRECTIONAL VALVE
ITEM	DESCRIPTION

ACCURPRESS

DESCRIPTION:
20 -30 HP STANDARD HYDRAULIC
MANIFOLD WITH OPTIONAL
RAM CLAMP AND DRF MANIFOLDS

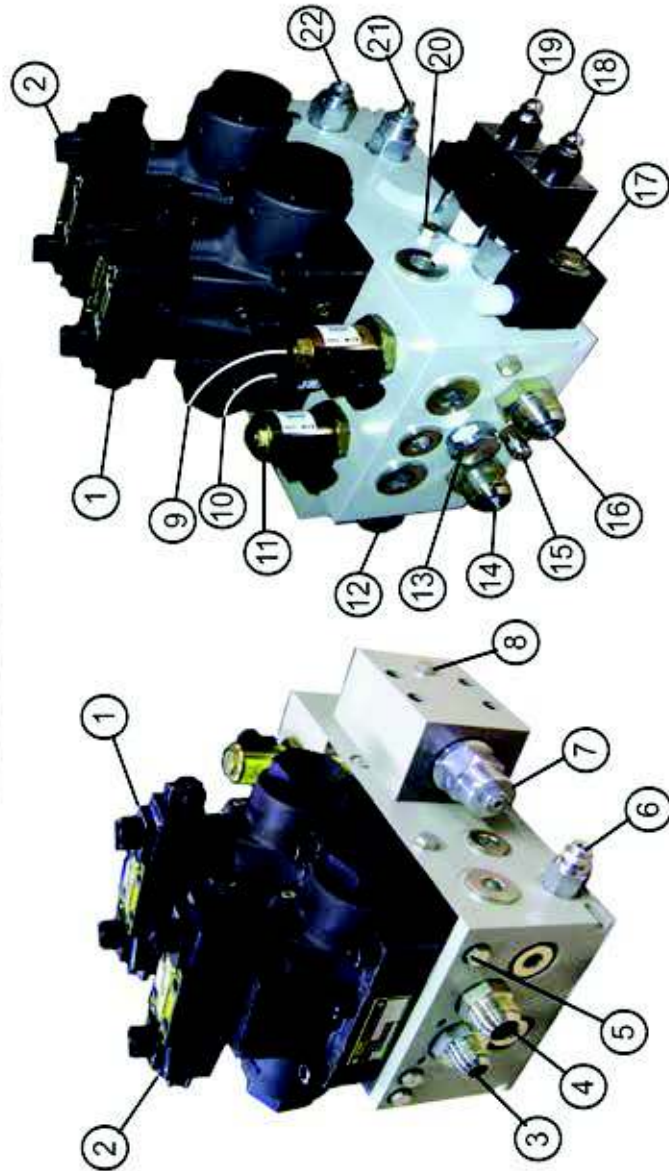
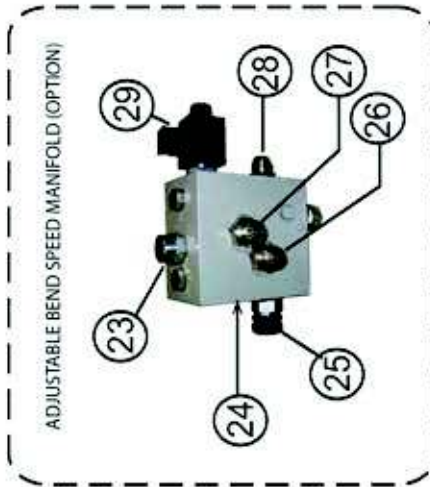


29	ENABLE SOLENOID
28	HP-IN
27	HP-OUT
26	DRAIN PORT
25	NEEDLE VALVE (FLOW CONTROL)
24	ADJUSTABLE BEND SPEED MANIFOLD
23	PRIORITY VALVE CARTRIDGE
22	HIGH PRESSURE RELIEF VALVE
21	HIGH VOLUME RELIEF VALVE
20	SIDE GAUGE TEST PORT
19	COMP. 2 VALVE (SIDE GAUGE CYLINDER)
18	COMP. 1 VALVE (ECCENTRIC CYLINDER)
17	BALANCE VALVE - COMP. 1, COMP. 2
16	ECCENTRIC PISTON PORT
15	ECCENTRIC END CYLINDER TEST PORT
14	SIDE GAUGE PISTON PORT
13	FLOW DIVIDER
12	ANNULUS PORT
11	SIDE GAUGE ISOLATION VALVE
10	TONNAGE TRANSDUCER
9	ECCENTRIC ISOLATION VALVE
8	COUNTER BALANCE TEST PORT
7	COUNTER BALANCE VALVE
6	COOLER RELIEF VALVE
5	HIGH PRESSURE TEST PORT
4	COOLER PORT
3	HIGH PRESSURE IN
2	HIGH PRESSURE DIRECTIONAL VALVE
1	HIGH VOLUME DIRECTIONAL VALVE
ITEM	DESCRIPTION

ACCURPRESS

DESCRIPTION:

**40 - 75 HP STANDARD
HYDRAULIC MANIFOLD**

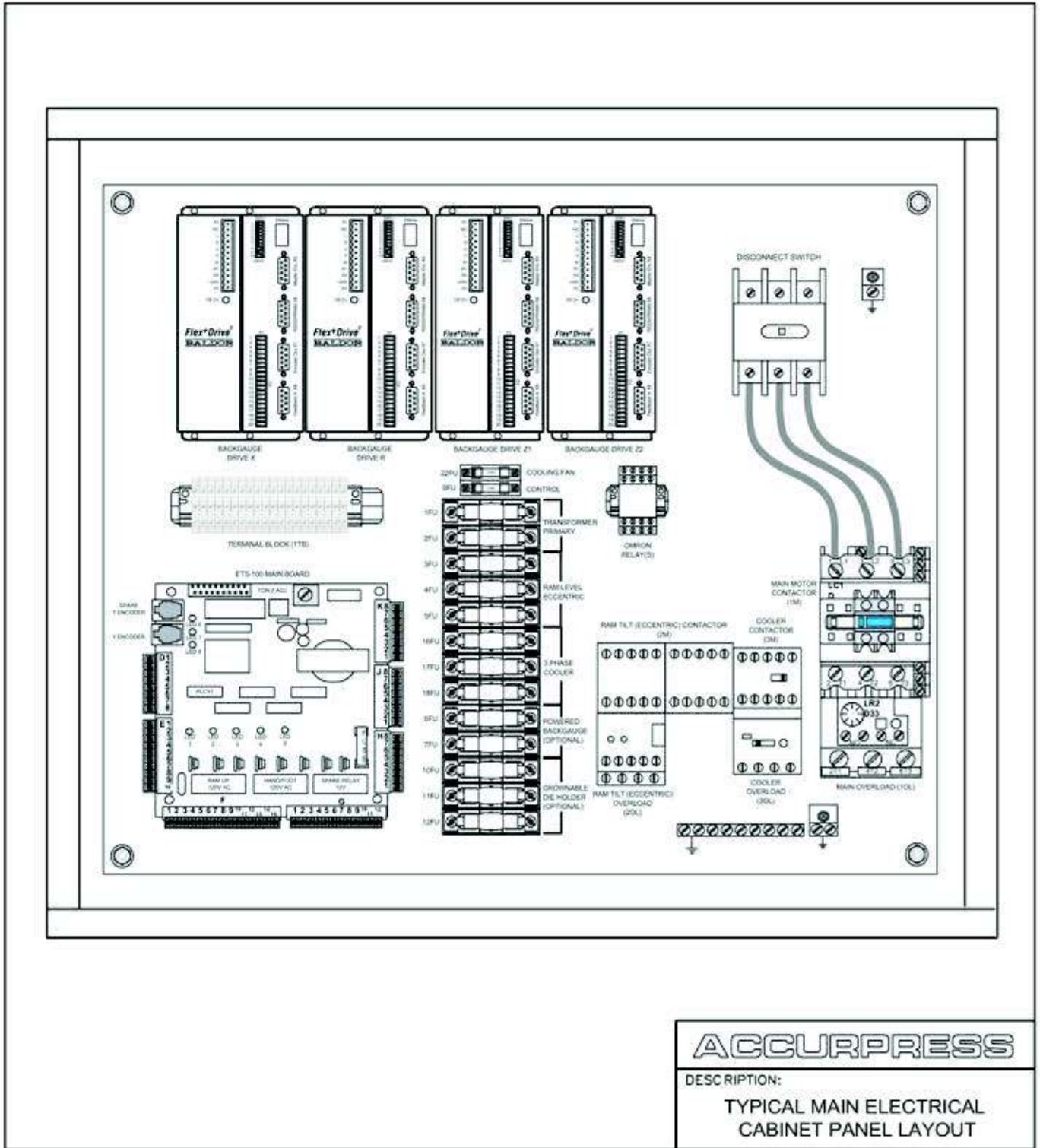


1	HIGH VOLUME VALVE
2	PROPORTIONAL VALVE
3	HIGH PRESSURE FILTER
4	FILTER CLOG INDICATOR
5	COMPENSATION VALVE
6	ABS VALVE
7	UNLOAD VALVE
8	HIGH PRESSURE INLET
9	SAFETY VALVE
10	FLOW DIVIDER
11	PRESSURE TRANSDUCER
12	HIGH PRESSURE RELIEF
13	BALANCE VALVE
14	CYLINDER ANNULUS
15	SG CYLINDER OUTLET
16	ECC CYLINDER OUTLET
17	COOLER OUTLET
18	PUMP FEEDBACK
19	SG CYLINDER TEST PORT
20	EC CYLINDER TEST PORT
ITEM	DESCRIPTION

ACCURPRESS

DESCRIPTION:
760 - 7250 MODEL US BUILT
MANIFOLD WITH ADVANTAGE
OPTION

A.12 Main Electrical Cabinet Back Panel Layout



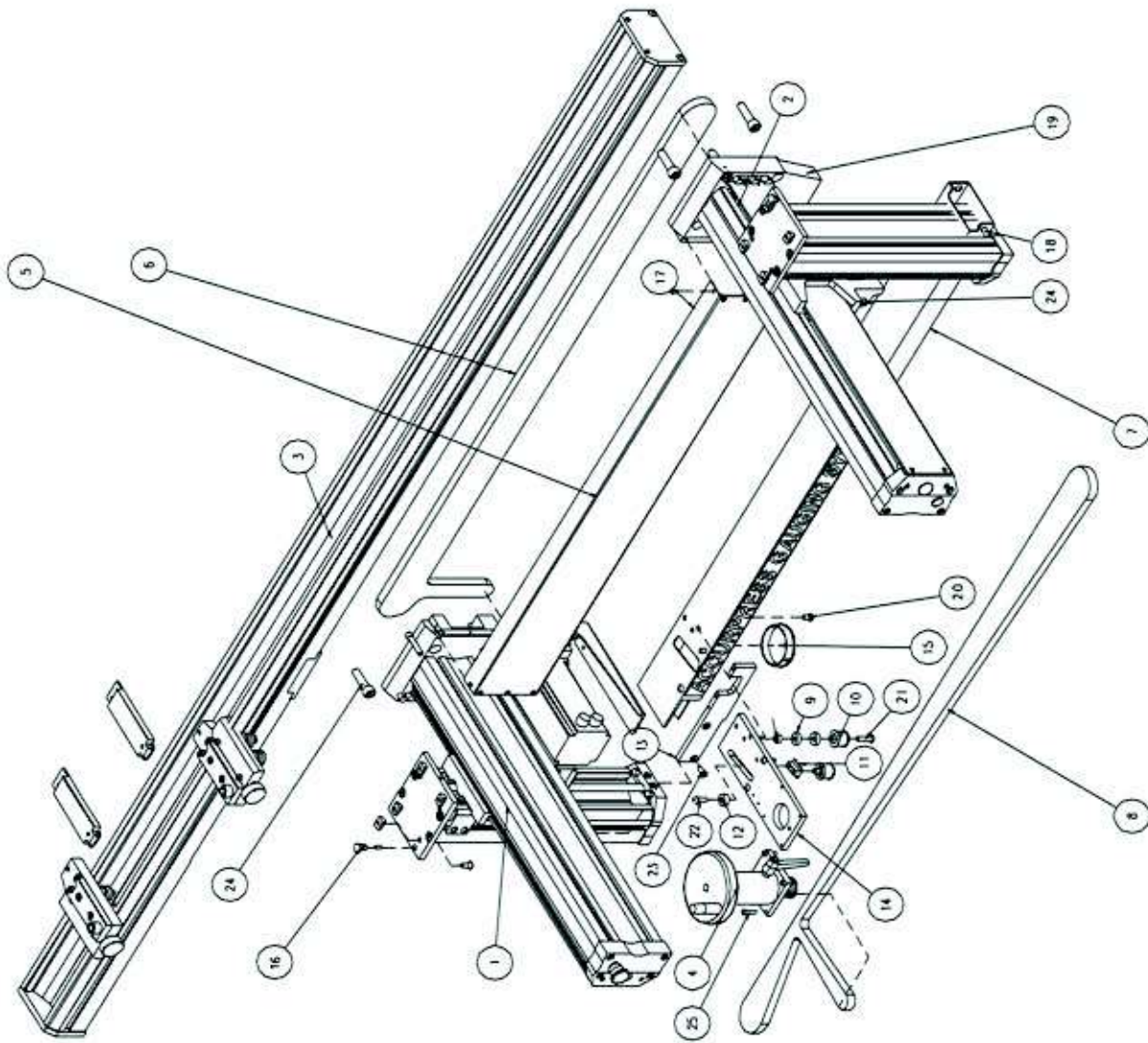
ACCURPRESS
 DESCRIPTION:
 TYPICAL MAIN ELECTRICAL
 CABINET PANEL LAYOUT

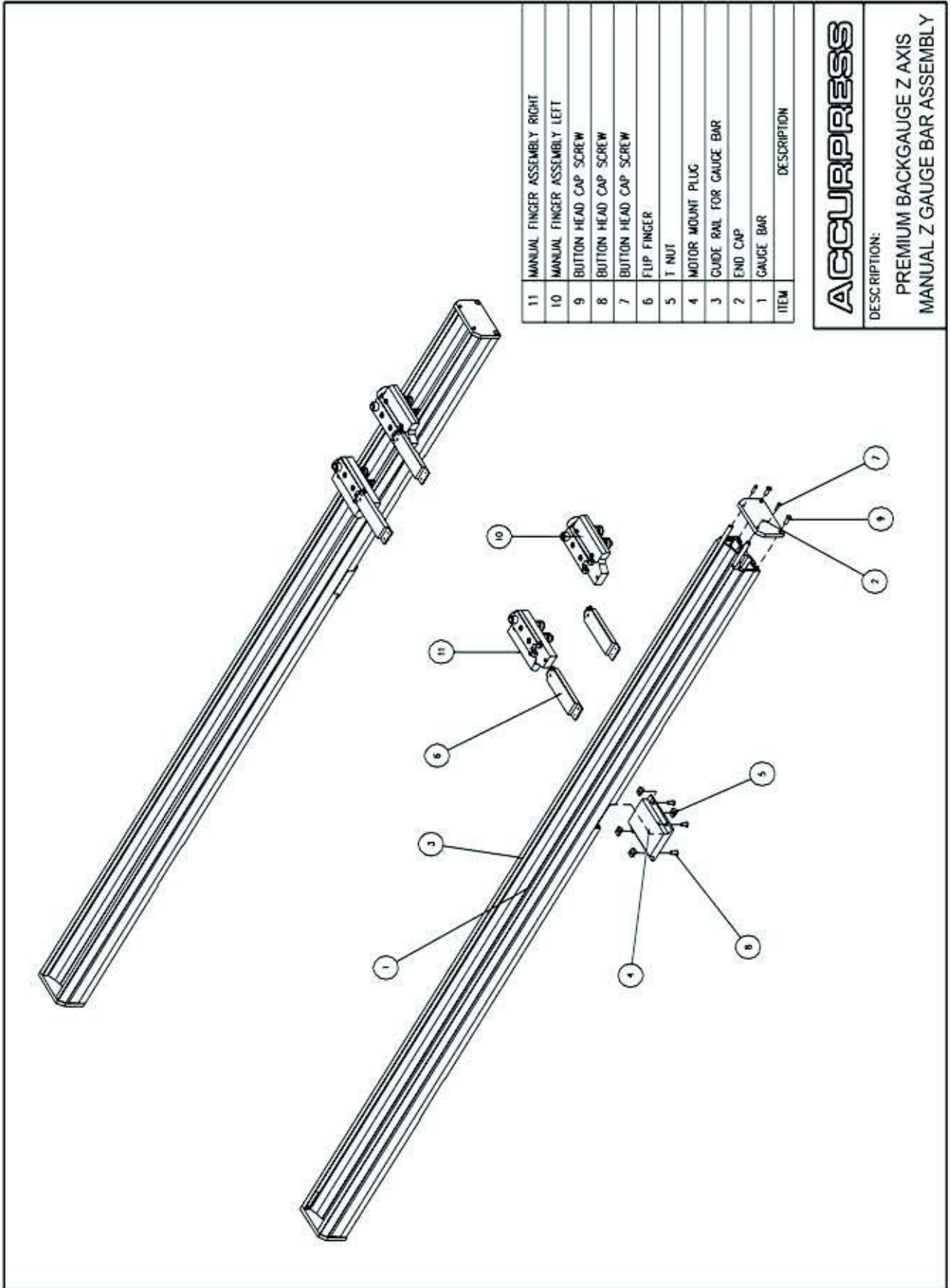
A.14 Premium Backgauge Assembly (Optional)

25	SOCKET HEAD CAP SCREW
24	HEX NUT
23	LOW HEAD SOCKET CAP SCREW
22	BUTTON HEAD CAP SCREW
21	BUTTON HEAD CAP SCREW
20	BUTTON HEAD CAP SCREW
19	SOCKET HEAD CAP SCREW
18	SOCKET HEAD CAP SCREW
17	BUTTON HEAD CAP SCREW
16	ECCENTRIC T BOLT
15	ACCESS COVER
14	MOTOR MOUNT
13	MOTOR MOUNT SUPPORT
12	WASHER FOR ADJUST IDLER
11	T NUT METRIC
10	IDLER PULLEY
9	BALL BEARING
8	TIMING BELT R AXIS
7	BELT COVER R AXIS
6	TIMING BELT X AXIS
5	BELT COVER X AXIS
4	MANUAL DRIVE UNIT R AXIS
3	MANUAL Z GAUGE BAR ASSEMBLY
2	X AND R AXIS NON MOTOR SIDE ASSEMBLY
1	X AND R AXIS MOTOR SIDE ASSEMBLY
ITEM	DESCRIPTION

ACCURPRESS

DESCRIPTION:
 PREMIUM BACKGAUGE
 POWER X AND MANUAL R AND Z AXES
 MAIN ASSEMBLY

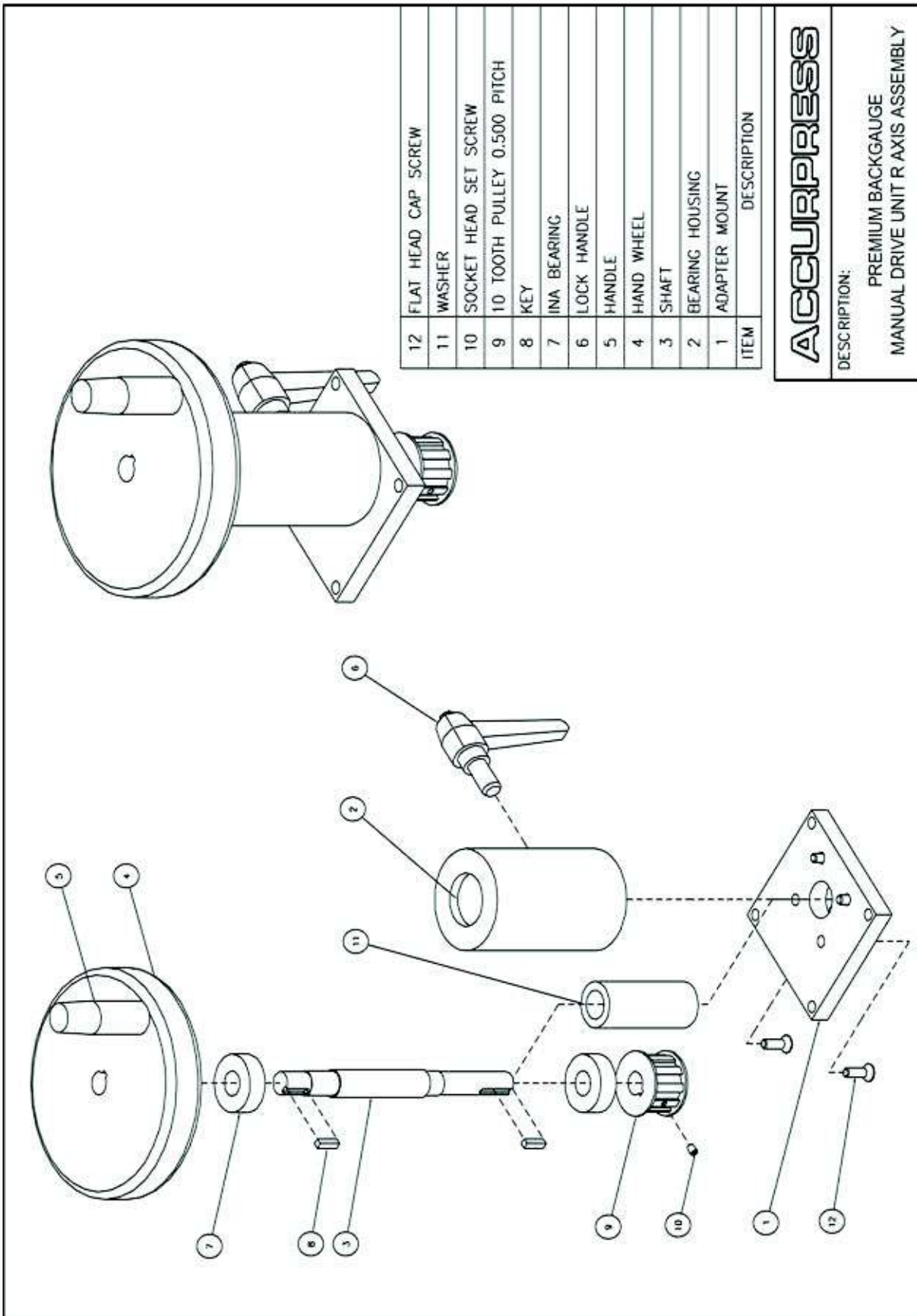




11	MANUAL FINGER ASSEMBLY RIGHT
10	MANUAL FINGER ASSEMBLY LEFT
9	BUTTON HEAD CAP SCREW
8	BUTTON HEAD CAP SCREW
7	BUTTON HEAD CAP SCREW
6	FLIP FINGER
5	T NUT
4	MOTOR MOUNT PLUG
3	GUIDE RAIL FOR GAUGE BAR
2	END CAP
1	GAUGE BAR
ITEM	DESCRIPTION

ACCURPRESS

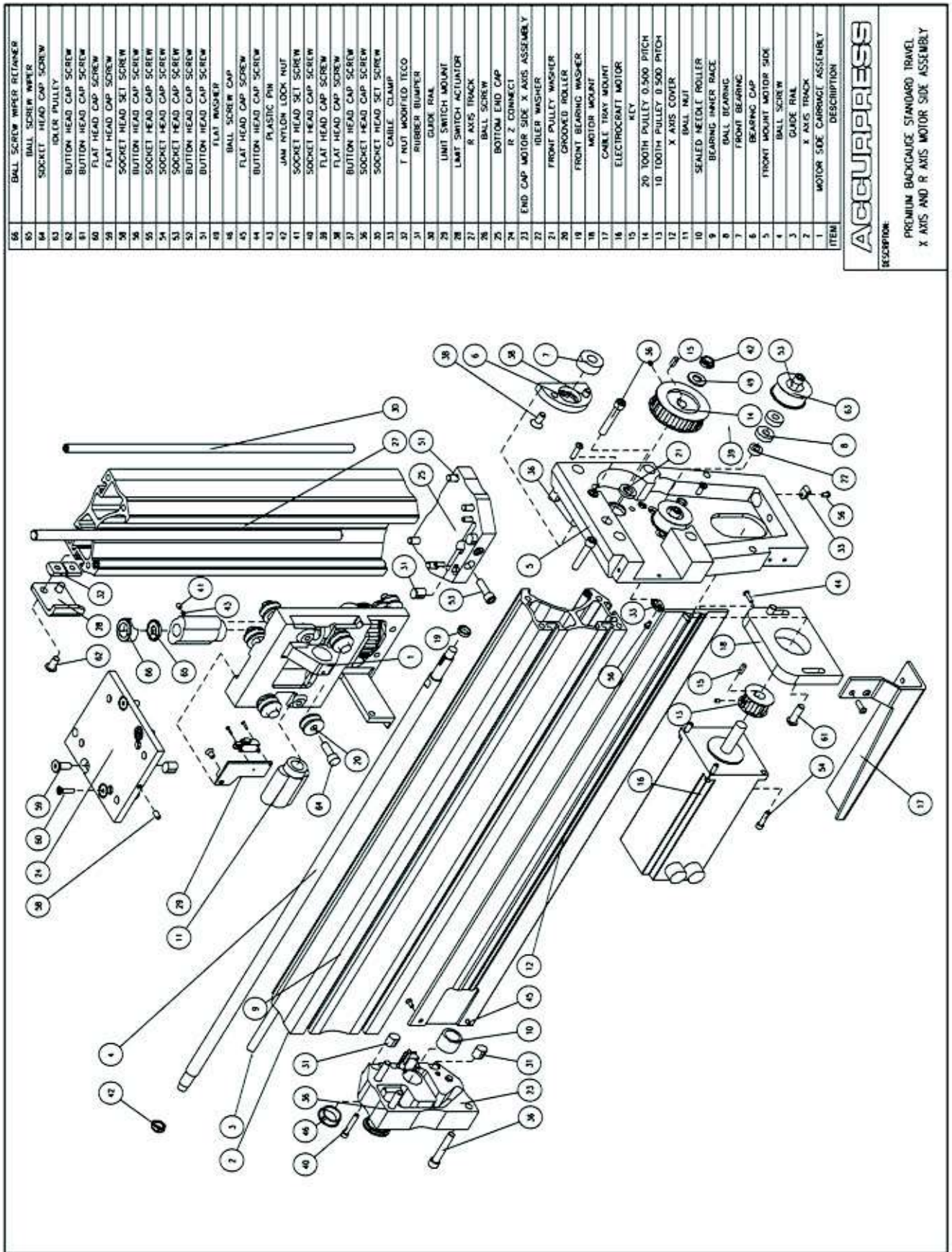
DESCRIPTION:
 PREMIUM BACKGAUGE Z AXIS
 MANUAL Z GAUGE BAR ASSEMBLY



ITEM	DESCRIPTION
12	FLAT HEAD CAP SCREW
11	WASHER
10	SOCKET HEAD SET SCREW
9	10 TOOTH PULLEY 0.500 PITCH
8	KEY
7	INA BEARING
6	LOCK HANDLE
5	HANDLE
4	HAND WHEEL
3	SHAFT
2	BEARING HOUSING
1	ADAPTER MOUNT

ACCURPRESS

DESCRIPTION:
 PREMIUM BACKGAUGE
 MANUAL DRIVE UNIT R AXIS ASSEMBLY



ACCURPRESS

DESCRIPTION:

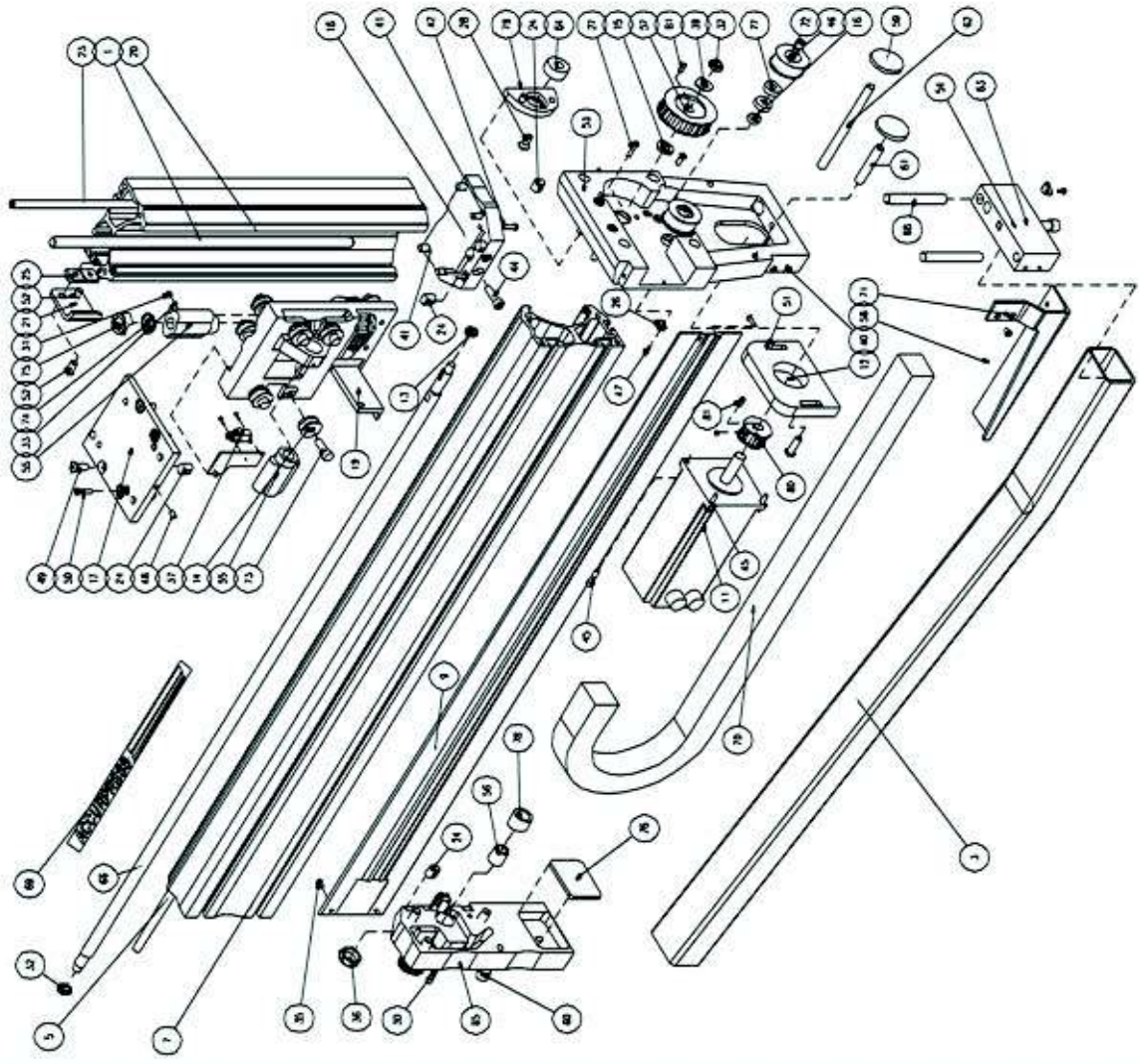
PREMIUM BACKGAUGE STANDARD TRAVEL
X AXIS AND R AXIS MOTOR SIDE ASSEMBLY

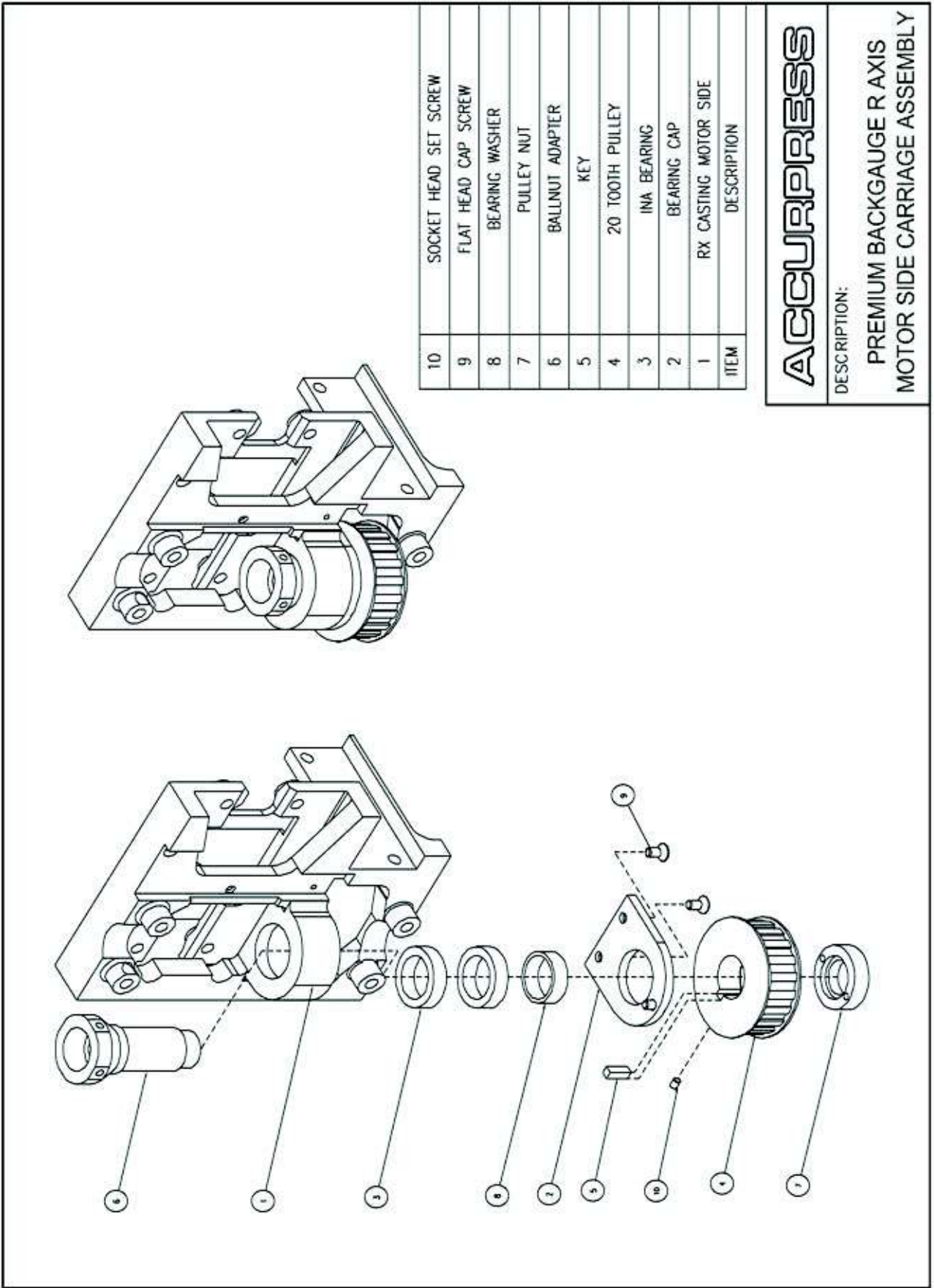
Accurpress

DESCRIPTION:

PREMIUM BACKGAUGE EXTENDED TRAVEL
X AXIS AND R AXIS MOTOR SIDE ASSEMBLY

ITEM	DESCRIPTION	ITEM	DESCRIPTION
40	BUTTON HEAD CAP SCREW	61	KEY
39	FLAT WASHER	80	10 TOOTH PULLEY 0.500 PITCH
37	LIMIT SWITCH	79	BEARING CAP
36	BALL SCREW CAP	78	SEALED NEEDLE ROLLER
35	FLAT HEAD CAP SCREW	77	BALL BEARING
34	BUTTON HEAD CAP SCREW	76	SUPPORT LEG SHIM
33	PLASTIC PIN	75	BALL SCREW WIPER RETAINER
32	JAM NUT/ON LOCK NUT	74	BALL SCREW WIPER
31	SOCKET HEAD SET SCREW	73	SOCKET HEAD CAP SCREW
30	SOCKET HEAD CAP SCREW	72	EXLER PULLEY
29	FLAT HEAD CAP SCREW	71	BUTTON HEAD CAP SCREW
28	FLAT HEAD CAP SCREW	70	CABLE TRAY
27	BUTTON HEAD CAP SCREW	69	MANIPULATE
26	CABLE CLAMP	68	DOWEL PIN
25	1 NUT MODIFIED TECO	66	BALL SCREW
24	RUBBER BUMPER	65	END CAP MOTOR SIDE X AXIS
23	GUIDE RAIL	64	FRONT BEARING
22	LIMIT SWITCH MOUNT	63	SOCKET HEAD CAP SCREW
21	LIMIT SWITCH ACTUATOR	62	SOCKET HEAD SET SCREW
20	R AXIS TRACK	61	SOCKET HEAD SET SCREW
19	MOTOR SIDE DARRAGE ASSEMBLY	60	SOCKET HEAD CAP SCREW
18	BOTTOM END CAP	59	SET SCREW SHIM
17	R Z CONNECT	58	CABLE TRAY MOUNT
16	EXLER WASHER	57	20 TOOTH PULLEY 0.500 PITCH
15	FRONT PULLEY WASHER	56	BEARING INNER RACE
14	GROOVED ROLLER	55	BALL NUT
13	FRONT BEARING WASHER	54	TUBIC POCKET MOTOR SIDE
12	MOTOR MOUNT	53	FRONT MOUNT MOTOR SIDE
11	ELECTROCRIFT MOTOR	52	BUTTON HEAD CAP SCREW
10	X AXIS CENTER	51	BUTTON HEAD CAP SCREW
9	X AXIS RIBBED COVER	50	FLAT HEAD CAP SCREW
8	X AXIS TRACK	49	FLAT HEAD CAP SCREW
7	X AXIS TRACK	48	SOCKET HEAD SET SCREW
6	GUIDE RAIL	47	SOCKET HEAD CAP SCREW
5	GUIDE RAIL	46	SOCKET HEAD CAP SCREW
4	SUPPORT TUBE	45	SOCKET HEAD CAP SCREW
3	SUPPORT TUBE	44	SOCKET HEAD CAP SCREW
2	BALL SCREW	43	SOCKET HEAD CAP SCREW
1	BALL SCREW	42	SOCKET HEAD CAP SCREW
		41	BUTTON HEAD CAP SCREW



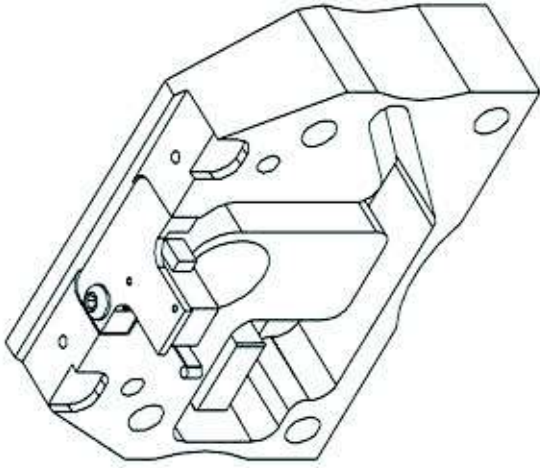


10	SOCKET HEAD SET SCREW
9	FLAT HEAD CAP SCREW
8	BEARING WASHER
7	PULLEY NUT
6	BALLNUT ADAPTER
5	KEY
4	20 TOOTH PULLEY
3	INA BEARING
2	BEARING CAP
1	RX CASTING MOTOR SIDE
ITEM	DESCRIPTION

ACCURPRESS

DESCRIPTION:

PREMIUM BACKGAUGE R AXIS
MOTOR SIDE CARRIAGE ASSEMBLY

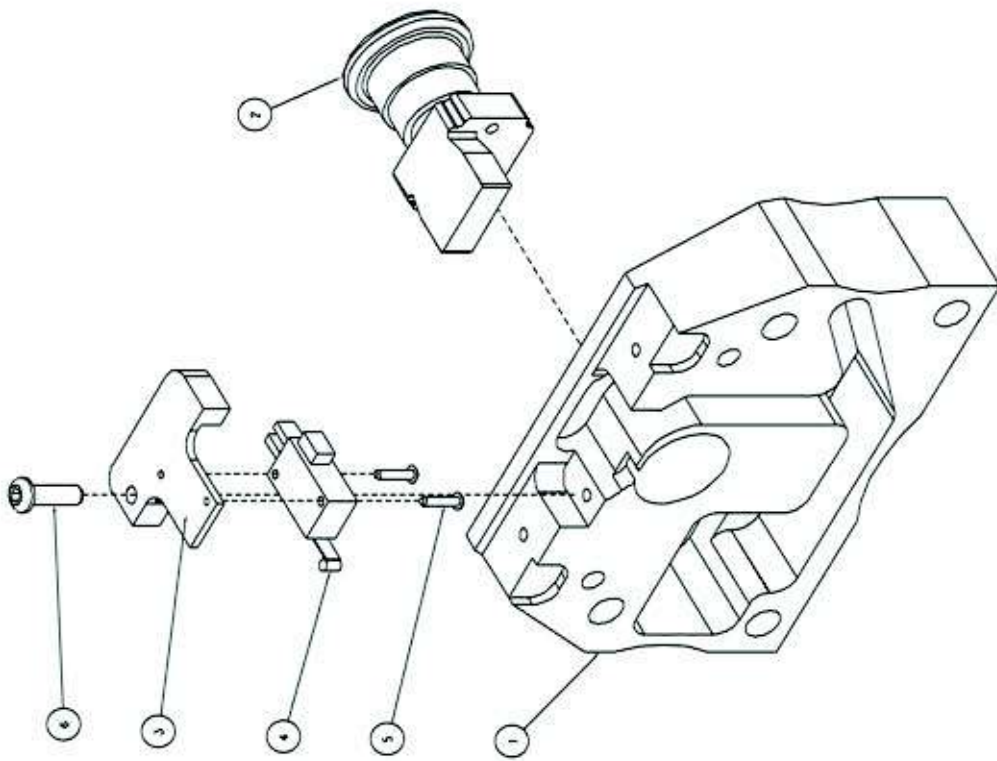


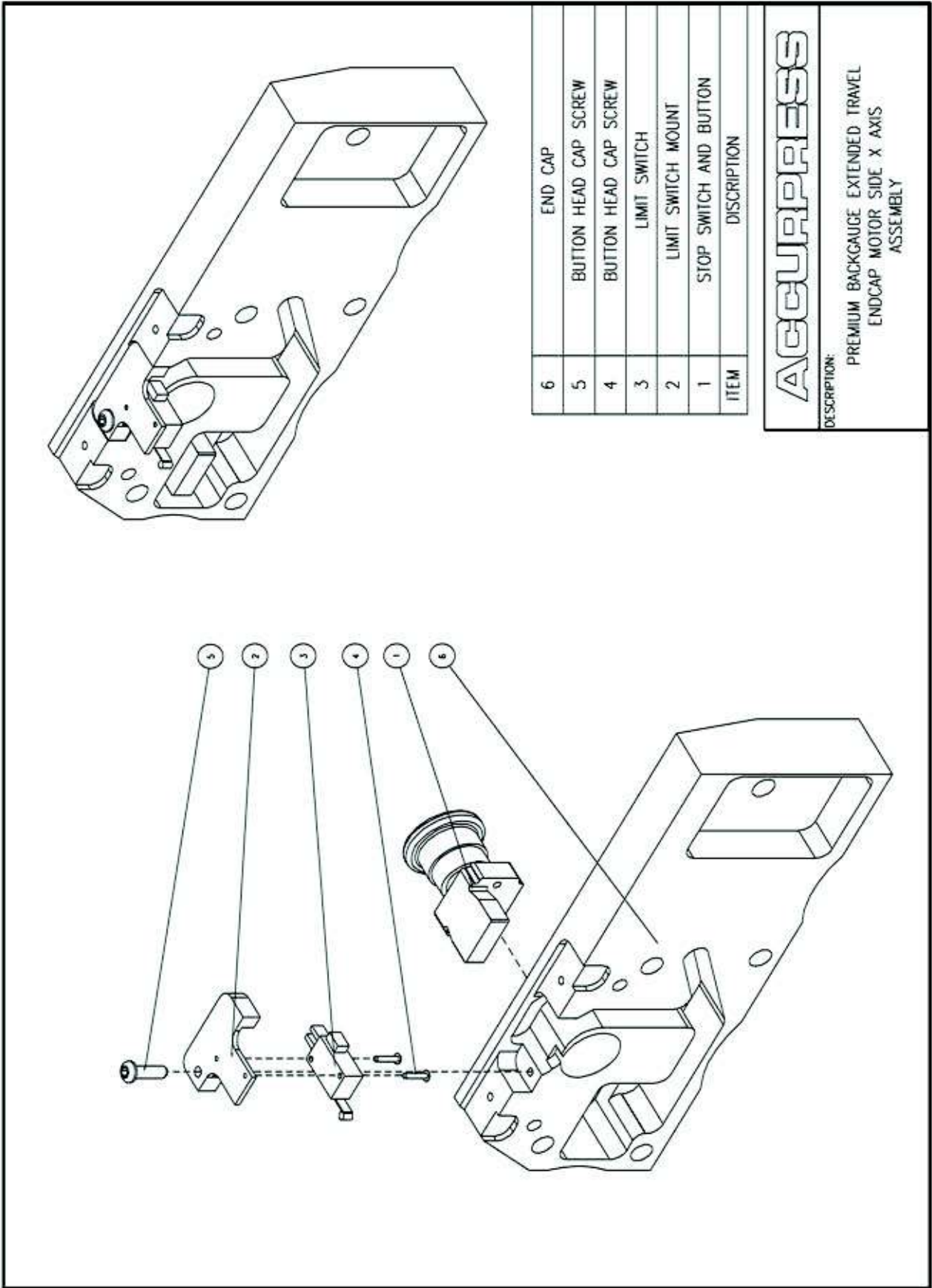
6	BUTTON HEAD CAP SCREW
5	BUTTON HEAD CAP SCREW
4	LIMIT SWITCH
3	LIMIT SWITCH MOUNT
2	STOP SWITCH AND BUTTON
1	END CAP
ITEM	DISCRIPTION

Accurpress

DISCRIPTION:

PREMIUM BACKGAUGE
ENDCAP MOTOR SIDE X AXIS
ASSEMBLY

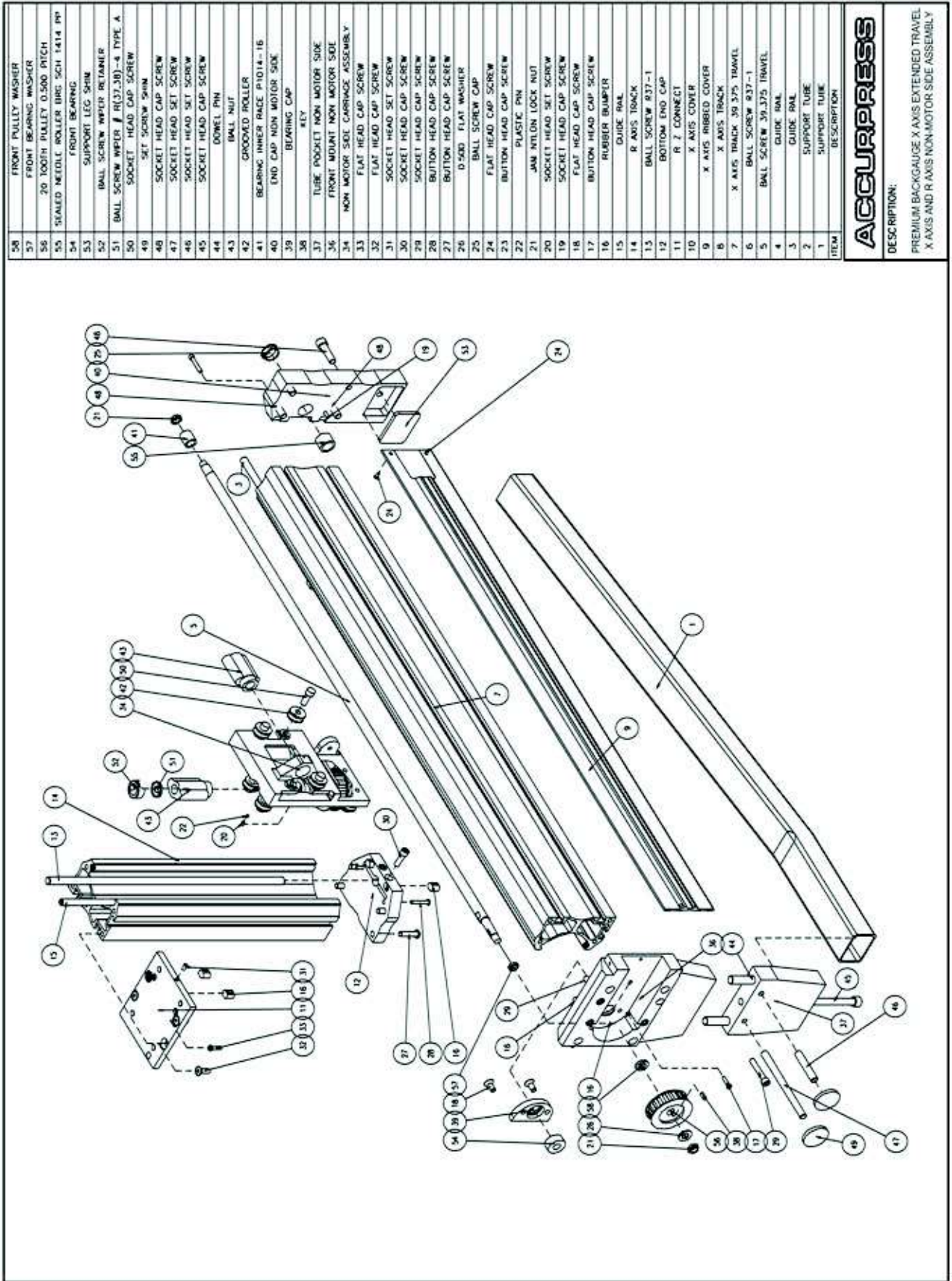




ITEM	DESCRIPTION
45	BALL SCREW WIPER RETAINER
44	BALL SCREW WIPER
42	NON MOTOR SIDE CARTRIDGE ASSEMBLY
41	BALL SCREW CAP
40	FRONT MOUNT NON MOTOR SIDE
39	END CAP
38	FLAT HEAD CAP SCREW
37	FLAT HEAD CAP SCREW
36	SOCKET HEAD SET SCREW
35	SOCKET HEAD CAP SCREW
34	BUTTON HEAD CAP SCREW
33	BUTTON HEAD CAP SCREW
32	0.500 FLAT WASHER
31	BALL SCREW CAP
30	FLAT HEAD CAP SCREW
29	BUTTON HEAD CAP SCREW
28	PLASTIC PIN
27	JAM NUT/LOCK NUT
26	SOCKET HEAD SET SCREW
25	SOCKET HEAD CAP SCREW
24	FLAT HEAD CAP SCREW
23	BUTTON HEAD CAP SCREW
22	SOCKET HEAD CAP SCREW
21	SOCKET HEAD CAP SCREW
20	RUBBER BUMPER
19	GUIDE RAIL
18	R AXIS TRACK
17	BALL SCREW
16	BOTTOM END CAP
15	R Z CONNECT
14	FRONT PULLEY WASHER
13	GROOVED ROLLER
12	FRONT BEARING WASHER
11	KEY
10	20 TOOTH PULLEY 0.500 PITCH
9	X AXIS COVER
8	BALL NUT
7	SEALED METEAL ROLLER BRG SCH
6	BEARING WIPER FACE
5	FRONT BEARING
4	BEARING CAP
3	BALL SCREW
2	GUIDE RAIL
1	X AXIS TRACK

ACCURPRESS

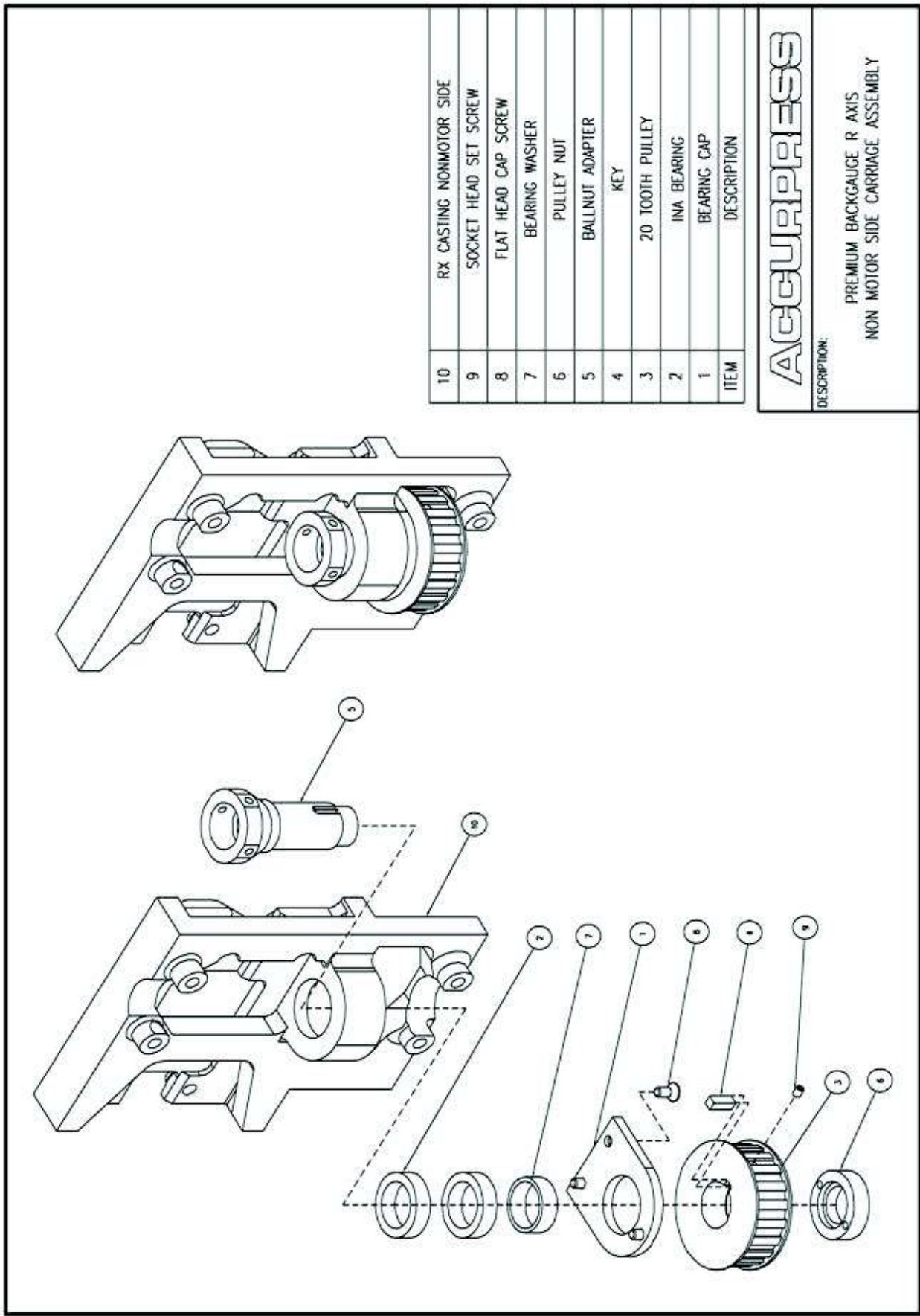
DESCRIPTION:
 PREMIUM BACKGAUGE STANDARD TRAVEL
 X AXIS AND R AXIS NON MOTOR SIDE ASSEMBLY



ACCURPRESS

DESCRIPTION:

PREMIUM BACKGAUGE X AXIS EXTENDED TRAVEL
X AXIS AND R AXIS NON-MOTOR SIDE ASSEMBLY

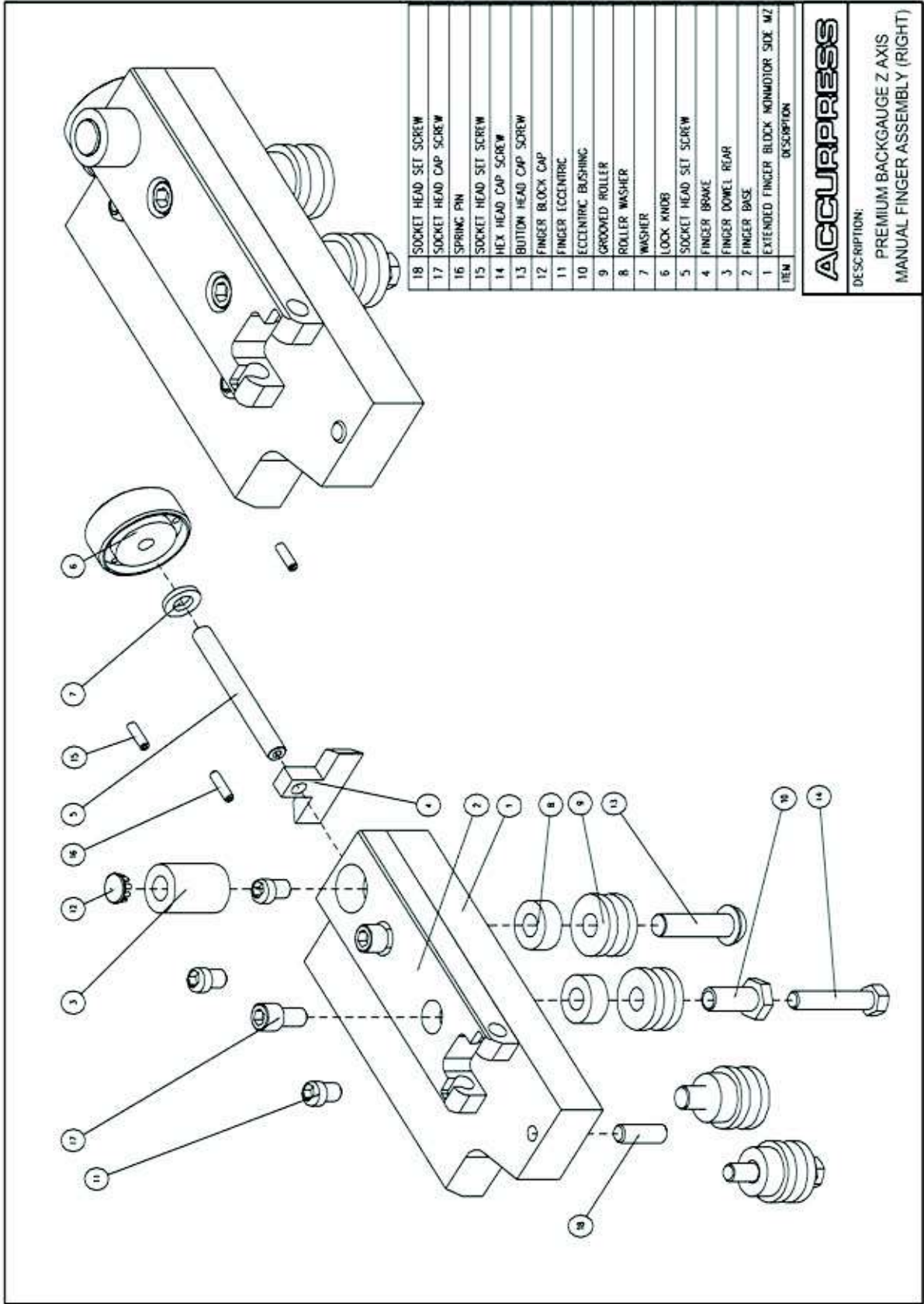


ACCURPRESS

DESCRIPTION:

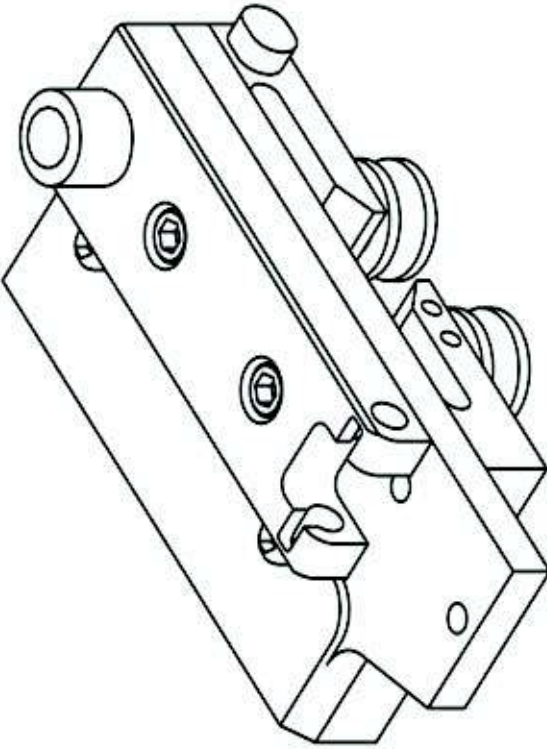
PREMIUM BACKGAUGE R AXIS
NON MOTOR SIDE CARRIAGE ASSEMBLY

A.15 Premium Backgauge Finger Assembly (Optional)



ACCURPRESS

DESCRIPTION:
 PREMIUM BACKGAUGE Z AXIS
 MANUAL FINGER ASSEMBLY (RIGHT)

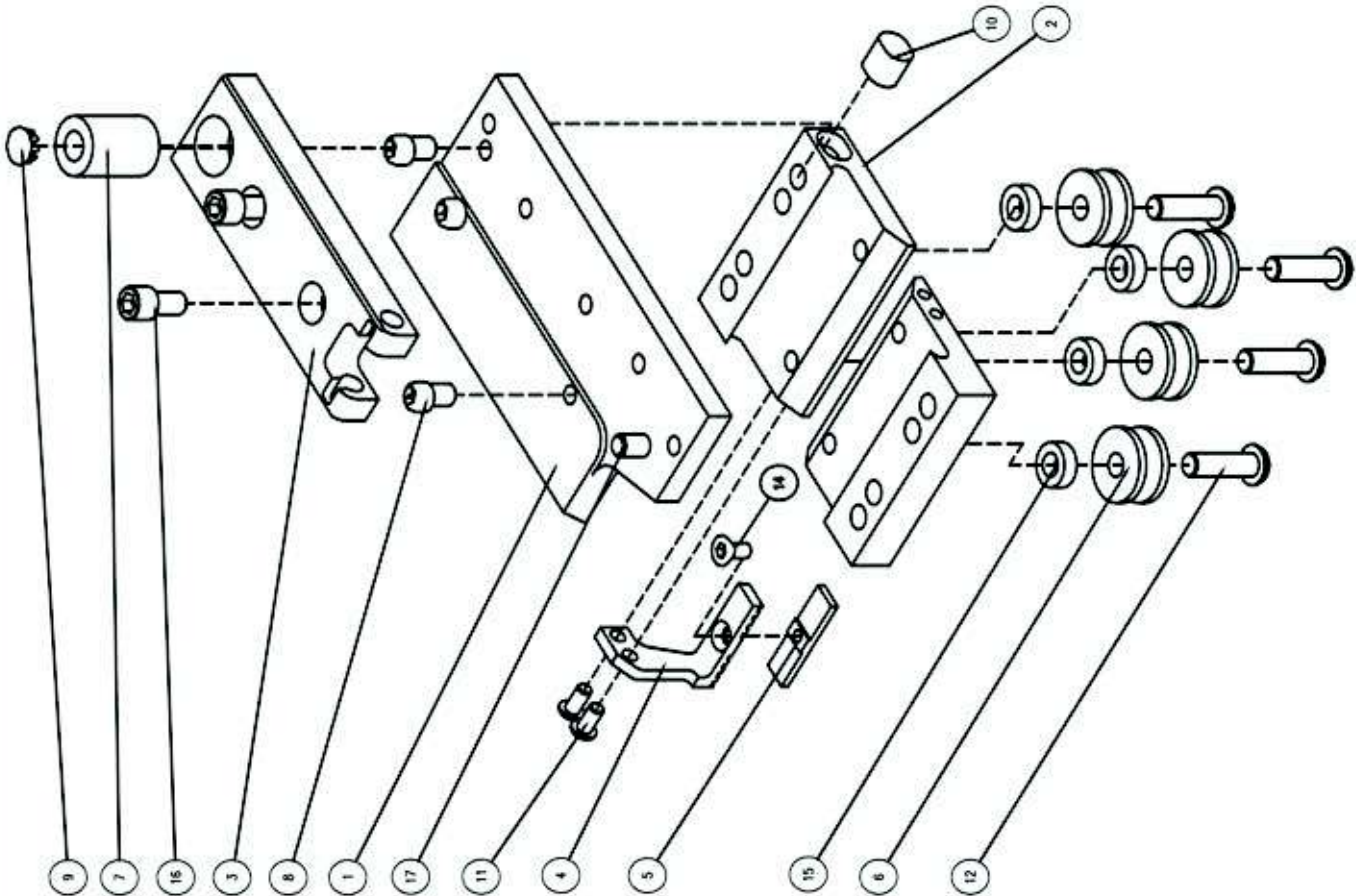


ITEM	DESCRIPTION
17	SOCKET HEAD SET SCREW
16	SOCKET HEAD CAP SCREW
15	ROLLER WASHER
14	FLAT HEAD CAP SCREW
12	BUTTON HEAD CAP SCREW
11	BUTTON HEAD CAP SCREW
10	RUBBER BUMPER
9	FINGER BLOCK CAP
8	FINGER ECCENTRIC
7	FINGER DOWEL REAR
6	GROOVED ROLLER
5	BELT CLAMP
4	BELT PLATE
3	FINGER BASE
2	FINGER ROLLER MOUNT PZ
1	EXTENDED FINGER BLOCK NONMOTOR SIDE PZ

ACCURPRESS

DESCRIPTION:

PREMIUM BACKGAUGE Z AXIS
POWER FINGER ASSEMBLY (RIGHT)

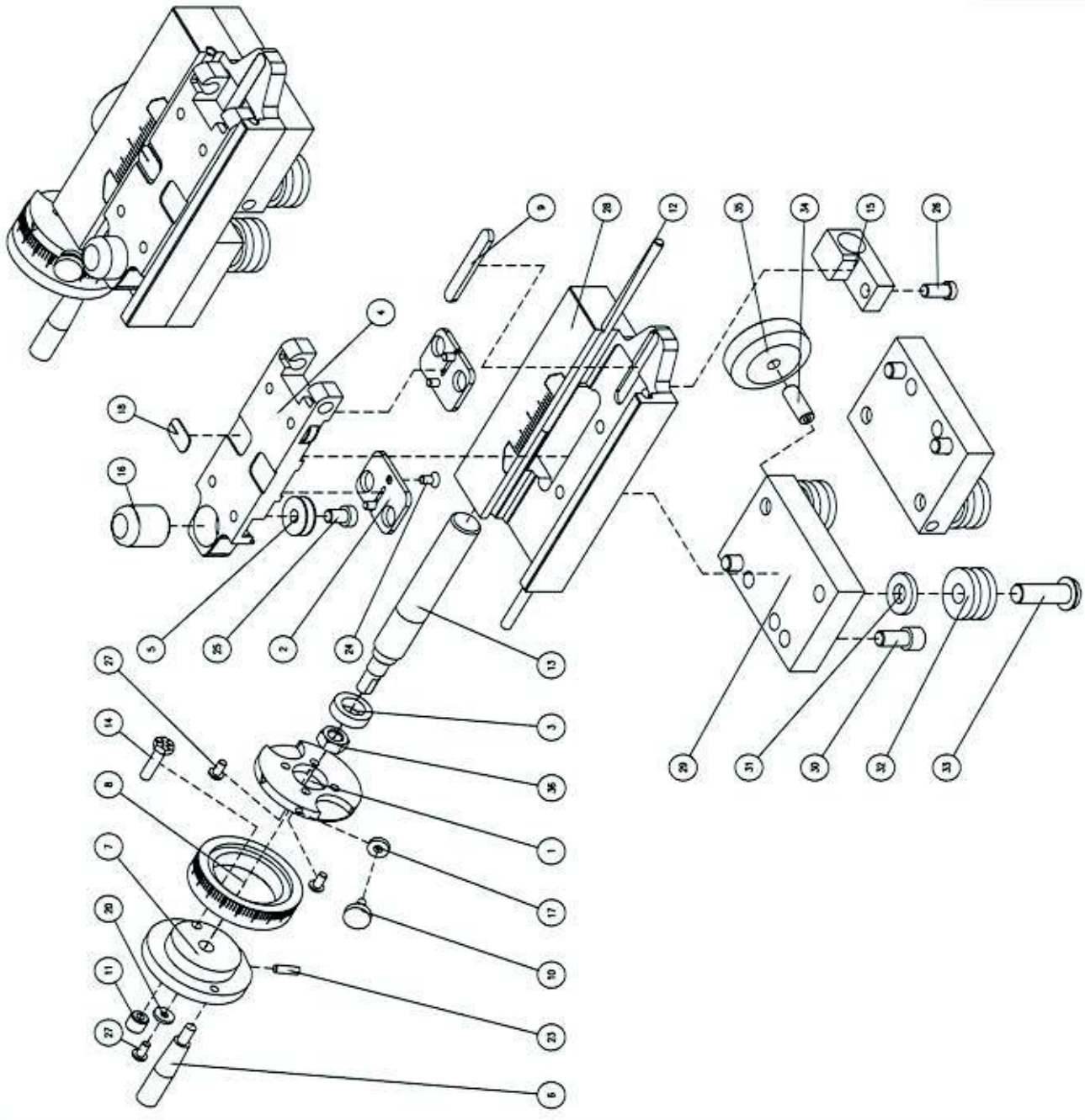


36	HEX NYLOCK JAM NUT
35	BRAKE KNOB
34	SOCKET HEAD SET SCREW
33	BUTTON HEAD CAP SCREW
32	GROOVED ROLLER
31	ROLLER WASHER
30	SOCKET HEAD CAP SCREW
29	MANUAL ROLLER MOUNT
28	X PRIME FINGER BLOCK RIGHT HAND
27	BUTTON HEAD CAP SOCKET SCREW
26	SOCKET HEAD CAP SCREW LOW HEAD
25	SOCKET HEAD CAP SCREW LOW HEAD
24	FLAT HEAD SOCKET SCREW
23	SOCKET HEAD SET SCREW
22	ONE BOX AND TWO FOAM INSERTS
21	3 PIECE LABEL SET
20	BOKERS FLAT WASHER
18	INDEX LABEL
17	THUMB SCREW WASHER # X316 SPU205
16	DOWEL PIN
15	LEAD SCREW NUT
14	LOCK PIN
13	LEAD SCREW
12	GUIDE RAIL WZ1/4
11	LOCK KNOB
10	THUMB LOCK KNOB #A914188399116
9	SET SCREW SKID PLATE
8	INCREMENT HUB
7	HAND WHEEL
6	HANDLE #29011
5	GROOVED ROLLER
4	FINGER BASE
3	BEARING #3802 2RS
2	BEARING CAP FOR LR60/8
1	BEARING CAP FOR 3802 2RS
ITEM	DESCRIPTION

ACCURPRESS

DESCRIPTION:

PREMIUM BACKGAUGE Z AXIS
MANUAL Z, MANUAL X PRIME
FINGER ASSEMBLY (LEFT)

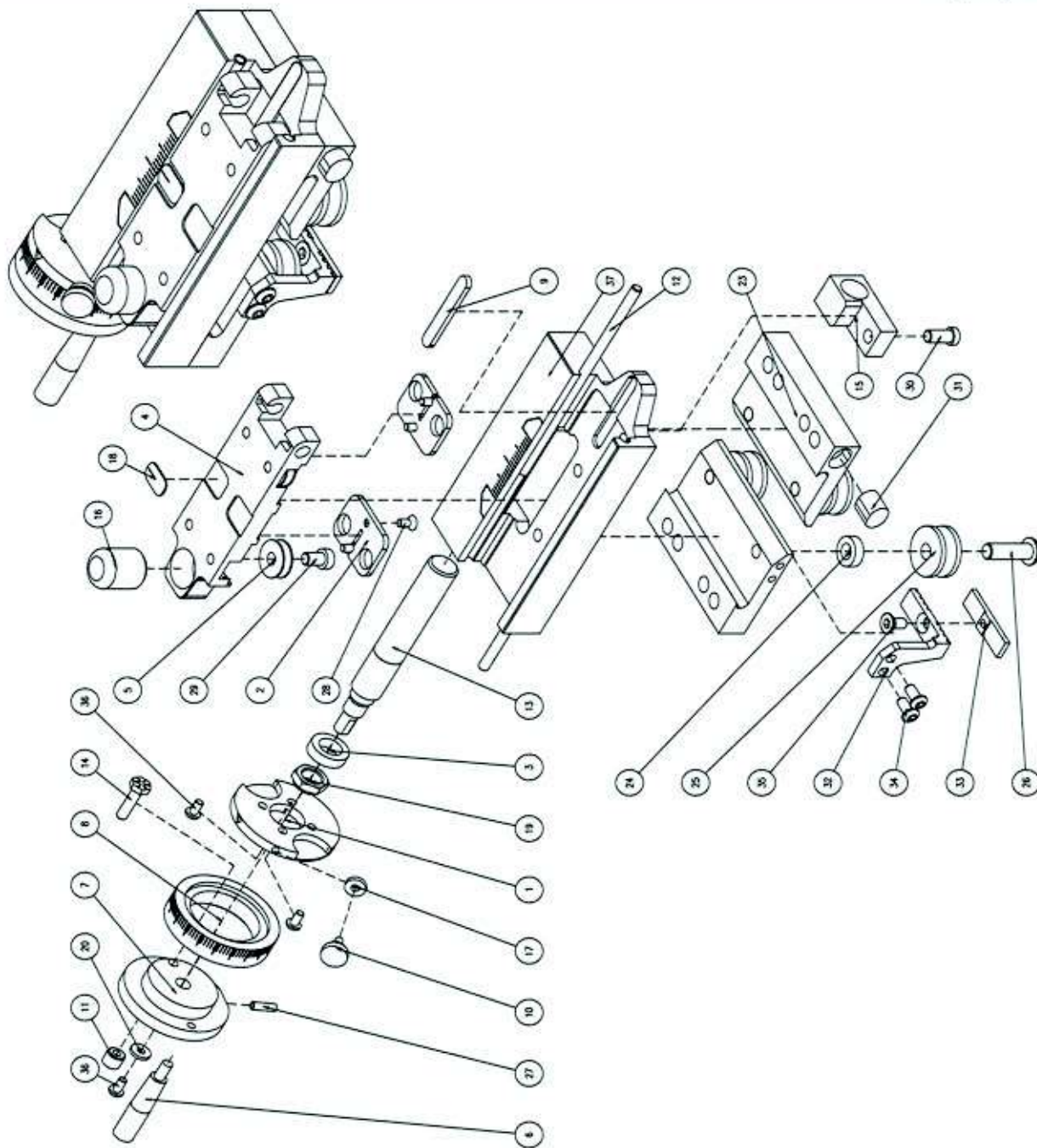


37	X PRIME FINGER BLOCK RIGHT HAND
36	BUTTON HEAD CAP SOCKET SCREW
35	FLAT HEAD CAP SCREW
34	BUTTON HEAD CAP SCREW
33	BELT CLAMP
32	BELT PLATE
31	RUBBER BUMPER
30	SOCKET HEAD CAP SCREW LOW HEAD
29	SOCKET HEAD CAP SCREW LOW HEAD
28	FLAT HEAD SOCKET SCREW
27	SOCKET HEAD SET SCREW
26	BUTTON HEAD CAP SCREW
25	GROOVED ROLLER
24	ROLLER WASHER
23	FINGER ROLLER MOUNT PZ
22	ONE BOX AND TWO FOAM INSERTS
21	3 PIECE LABEL SET
20	BOXERS FLAT WASHER
19	JAM NYLON LOCK NUT
18	INDEX LABEL
17	THUMB SCREW WASHER # X316 SPU205
16	DOWEL PIN
15	LEAD SCREW NUT
14	LOCK PIN
13	LEAD SCREW
12	GUIDE RAIL #Z1/4
11	LOCK KNOB
10	THUMB LOCK KNOB #A914188399116
9	SET SCREW SKID PLATE
8	INCREMENT HUB
7	HAND WHEEL
6	HANDLE #29011
5	GROOVED ROLLER
4	FINGER BASE
3	BEARING #3802 2RS
2	BEARING CAP FOR LR60/8
1	BEARING CAP FOR 3802 2RS
ITEM	DESCRIPTION

ACCURPRESS

DESCRIPTION:

PREMIUM BACKGAUGE Z AXIS
POWER Z. MANUAL X PRIME
FINGER ASSEMBLY (LEFT)

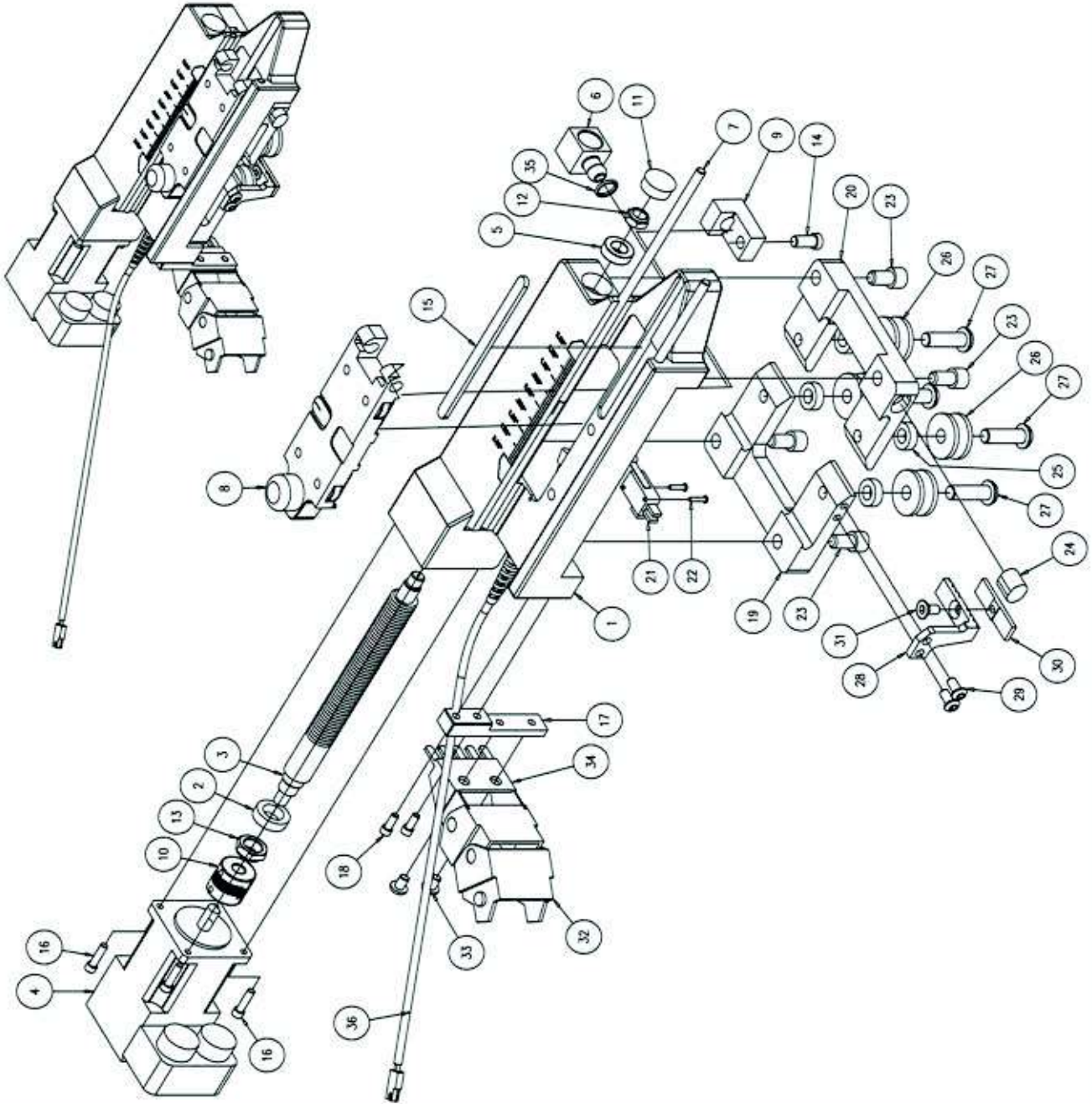


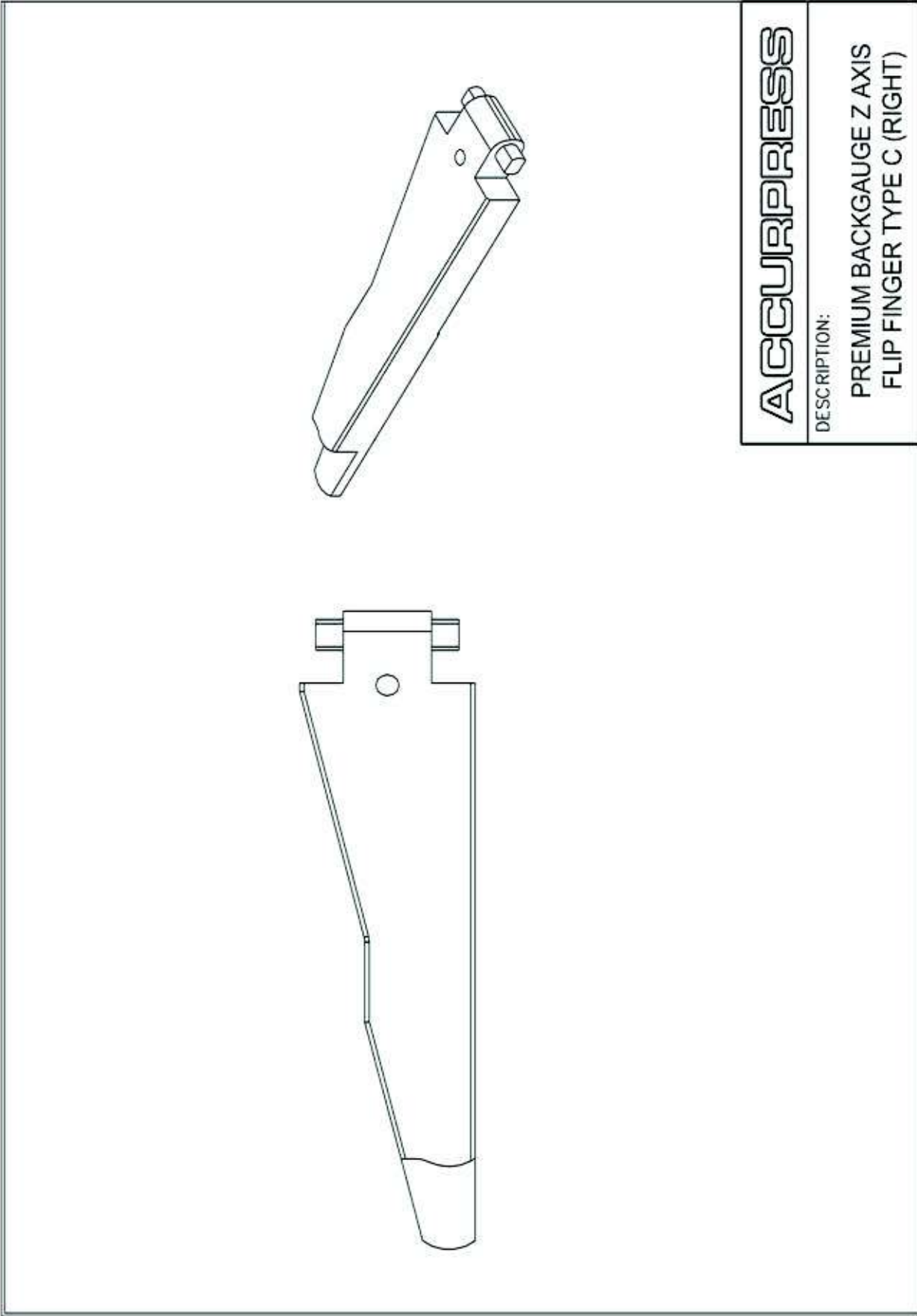
36	PWR XPRIME, LIMIT SWITCH CABLE
35	O-RING
34	WIRE HARNESS BRACKET SET
33	BUTTON HEAD CAP SOCKET SCREW
32	WIRE HARNESS TRACK
31	FLAT HEAD CAP SCREW
30	BELT CLAMP
29	BUTTON HEAD CAP SCREW
28	BELT PLATE
27	BUTTON HEAD CAP SCREW
26	GROOVED ROLLER
25	ROLLER WASHER
24	RUBBER BUMPER
23	SOCKET HEAD CAP SCREW
22	BUTTON HEAD CAP SCREW
21	LIMIT SWITCH
20	FINGER ROLLER MOUNT POWER Z, MACH
19	FINGER ROLLER MOUNT POWER Z, MACH
18	SOCKET HEAD CAP SCREW
17	CABLE TRAY BRACKET, MACH
16	SOCKET HEAD CAP SCREW
15	SET SCREW SKID PLATE
14	SOCKET HEAD CAP SCREW LOW HEAD
13	JAM NYLON LOCK NUT
12	NYLON LOCK NUT
11	DOME PLUG
10	HELICAL COUPLING-FLEX
9	LEAD SCREW NUT, FEMALE, MACHINE DETAIL
8	FLIP FINGER BASE
7	GUIDE RAIL WZ1/4
6	LEAD SCREW NUT, MALE, MACHINE DETAIL
5	BEARING,BALL DBL ROW ANGULAR
4	BRUSHLESS SERVO MOTOR
3	POWER XPRIME,LEAD SCREW,MACH
2	BEARING #3802 2RS
1	POWER X PRIME FINGER BLOCK, MACH
ITEM	DESCRIPTION

ACCURPRESS

DESCRIPTION:

PREMIUM BACKGAUGE Z AXIS
POWER Z, POWER X PRIME
FINGER ASSEMBLY (MOTOR SIDE)

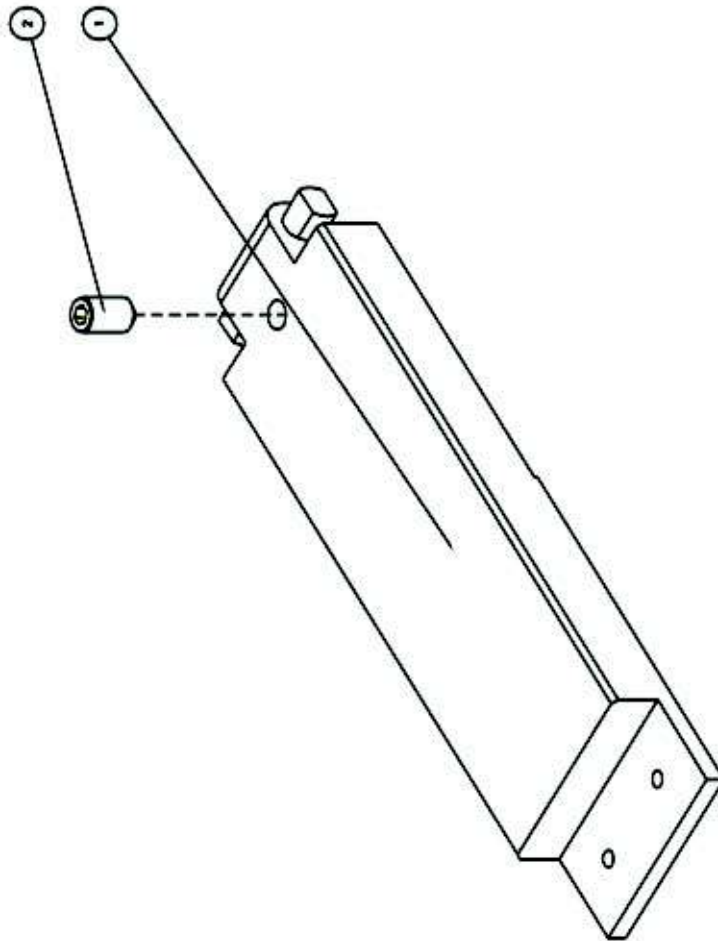
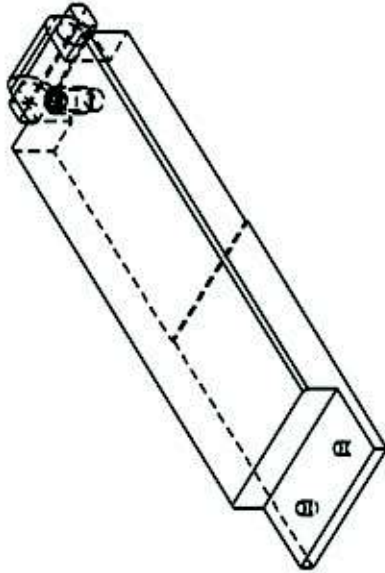




ACCURPRESS

DESCRIPTION:

PREMIUM BACKGAUGE Z AXIS
FLIP FINGER TYPE C (RIGHT)



2	SOCKET HEAD SET SCREW
1	FLIP FINGER TYPE K
ITEM	DESCRIPTION

ACCURPRESS

DESCRIPTION:

PREMIUM BACKGAUGE Z AXIS
FLIP FINGER TYPE K (RIGHT)

A.17 Automatic Sheet Follower (Optional)

ITEM	DESCRIPTION
1	MAIN SLIDE ASSEMBLY
2	MOTOR/GEARBOX ASSEMBLY
3	MOTOR CARRIAGE ASSEMBLY
4	JACK ASSEMBLY
5	JACK ASSEMBLY
6	BASE
7	CLAMPING BAR
8	SEGMENT
9	CHAIN ANCHOR
10	LIMIT SWITCH TRIP
11	CLEVIS MOUNT
12	SCREW SOCKET HEAD CAP
13	CARRIAGE
14	SCREW SOCKET HEAD CAP
15	SCREW SOCKET HEAD CAP
16	SCREW FLAT HEAD SOCKET
17	SOCKET HEAD CAP SCREW
18	WASHER LOCK
19	WASHER FLAT / SAE
20	CHAIN, 60 PITCH, 33 LINKS
21	PIN STOP
22	BUTTON HEAD CAP SCREW
23	BUTTON HEAD CAP SCREW
24	SCREW SOCKET HEAD CAP
25	CAM FOLLOWER
26	CAM FOLLOWER SUPPORT
27	NYLOCK NUT
28	SCREW SOCKET HEAD CAP
29	BRAKE ASSEMBLY
30	BOX
31	BACK COVER
32	BUMPER SHAFT
33	SET SCREW (SOCKET HEAD)
34	RUBBER BUMPER
35	SCREW SOCKET HEAD CAP

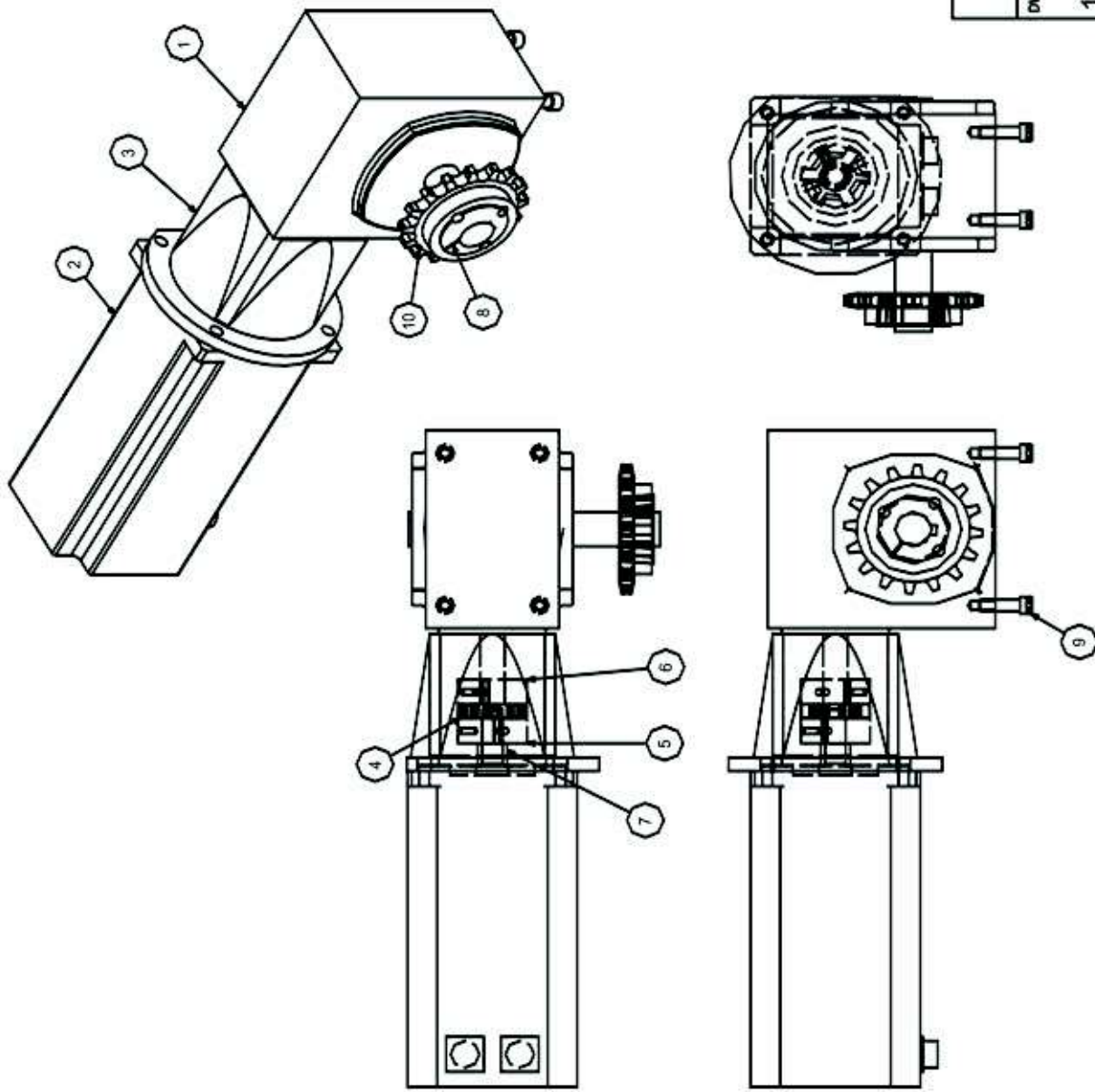
ACCURPRESS

DESCRIPTION
11.1
 AUTOMATIC SHEET FOLLOWER ASSEMBLY

ITEM	DESCRIPTION
1	BRAKE LEVER
2	SHAFT SUPPORT
3	MAIN SHAFT
4	IDLER SHAFT
5	ECCENTRIC SHAFT
6	ECCENTRIC SHAFT SUPPORT
7	SPROCKET
8	SPACER
9	SPACER
10	V ROLLER
11	BEARING
12	WASHER
13	TOP BRASE
14	WASHER, FLAT
15	NUY, NYLOCK
16	NUT, NYLOCK
17	HORIZONTAL SLIDE BASE
18	GUSSET
19	SCREW, SOCKET HEAD CAP
20	GEAR MOUNTING BASE
21	TAKEUP BAR
22	WASHER, FLAT
23	WASHER, LOCK
24	SCREW, SOCKET HEAD
25	NUT
26	SCREW, SOCKET HEAD CAP
27	BUMPER
28	BUMPER
29	SCREW, BUTTON HEAD CAP
30	LIMIT SWITCH BRACKET
31	LIMIT SWITCH
32	SCREW, SOCKET HEAD CAP
33	CARRIAGE LUG
34	ROLLER GUIDE PLATE
35	CLAMPING BAR
36	SCREW, SOCKET HEAD CAP
37	FLAT HEAD CAP SCREW
38	NYLON NUT
39	SCREW, SOCKET HEAD CAP
40	SOCKET HEAD CAP SCREW

ITEM	DESCRIPTION
36	SCREW, SOCKET HEAD CAP
37	FLAT HEAD CAP SCREW
38	NYLON NUT
39	SCREW, SOCKET HEAD CAP
40	SOCKET HEAD CAP SCREW

ACCURPRESS	
11.2	SHEET FOLLOWER MOTOR CARRIAGE ASSEMBLY



ITEM	DESCRIPTION
1	SPEED REDUCER
2	MOTOR
3	MOTOR ADAPTOR
4	COUPLING
5	COUPLING
6	COUPLING
7	COUPLING SPACER
8	TAPER LOCK
9	SCREW, SOCKET HEAD CAP
10	TAPER LOCK SPROCKET

ACCURPRESS

DWG #: 11.3

DESCRIPTION: SHEET FOLLOWER MOTOR AND GEARBOX ASSEMBLY

ITEM	DESCRIPTION
1	JACK SUPPORT
2	SCREW JACK
3	SCREW, SOCKET HEAD CAP
4	SCREW, SET (SOCKET HEAD)
5	WASHER, LOCK
6	CLEVIS YOKE
7	HANDWHEEL
8	HAND WHEEL EXT LONG
9	NYOIL FLANGE
10	HEX HEAD
11	WASHER, LOCK
12	KEY STEEL
13	FLAT WASHER
14	SCREW, FLAT HEAD SOCKET
15	CLEVIS PIN
16	HITCH PIN CLIP
17	JAM NUT
18	SCREW, SOCKET HEAD CAP

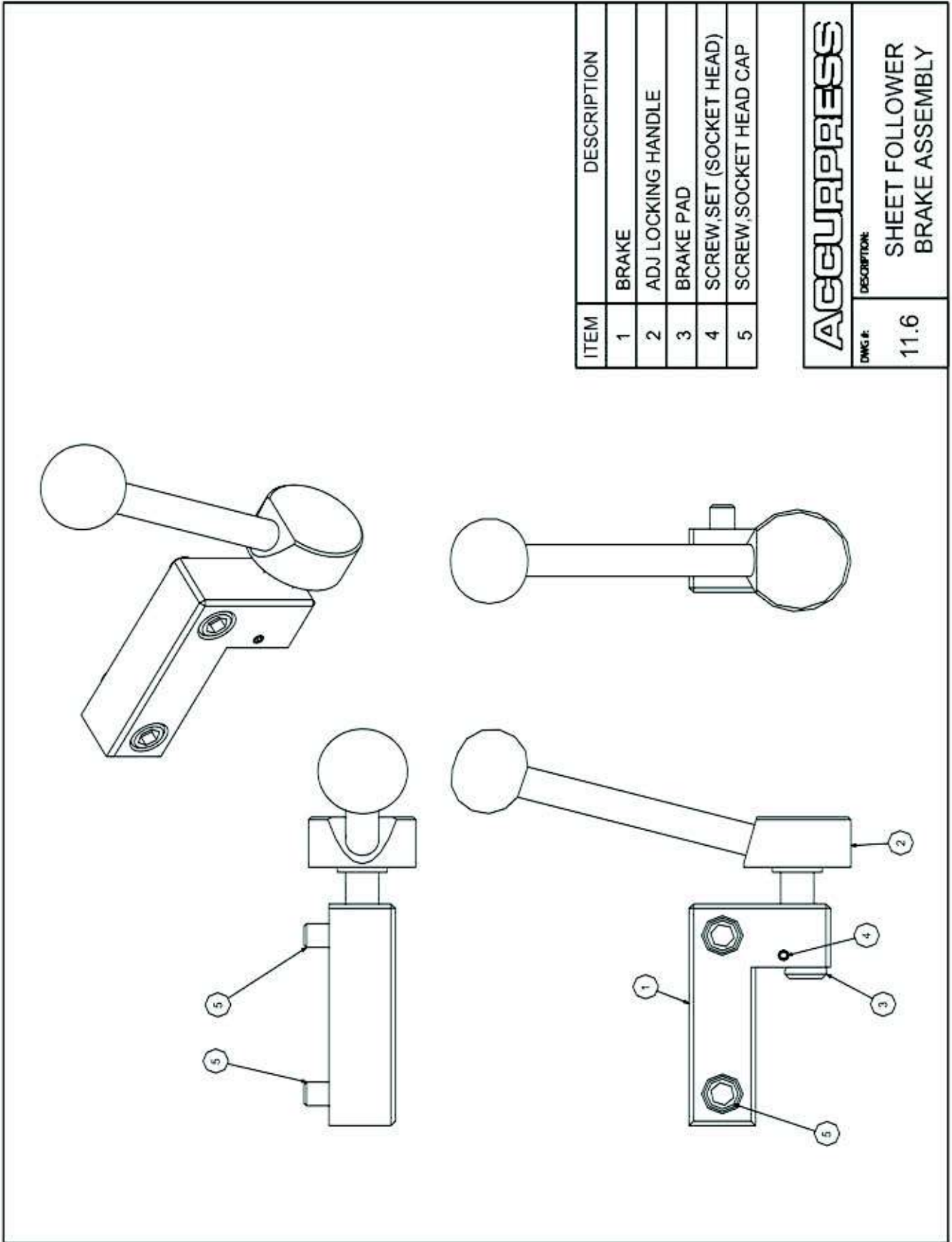
Accurpress

DWG # 11.4 DESCRIPTION SHEET FOLLOWER HORIZONTAL JACK ASSEMBLY

ITEM	DESCRIPTION
1	SCREW JACK
2	JACK SUPPORT
3	KEY STEEL
4	SCREW, SOCKET HEAD CAP
5	SCREW, SOCKET HEAD CAP
6	SCREW, SET (SOCKET HEAD)
7	WASHER, LOCK
8	CLEVIS YOKE
9	HANDWHEEL
10	HAND WHEEL EXT LONG
11	NYOIL FLANGE
12	HEX HEAD
13	WASHER, LOCK
14	FLAT WASHER
15	SCREW, FLAT HEAD SOCKET
16	CLEVIS PIN
17	HITCH PIN CLIP

ACCURPRESS

DWG #: 11.5 DESCRIPTION: SHEET FOLLOWER VERTICAL JACK ASSEMBLY



ITEM	DESCRIPTION
1	BRAKE
2	ADJ LOCKING HANDLE
3	BRAKE PAD
4	SCREW, SET (SOCKET HEAD)
5	SCREW, SOCKET HEAD CAP

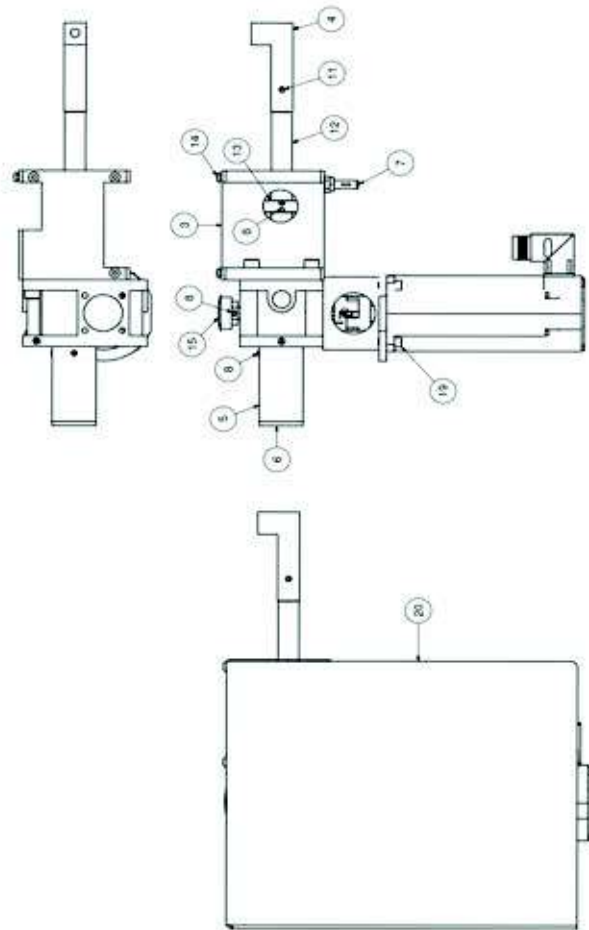
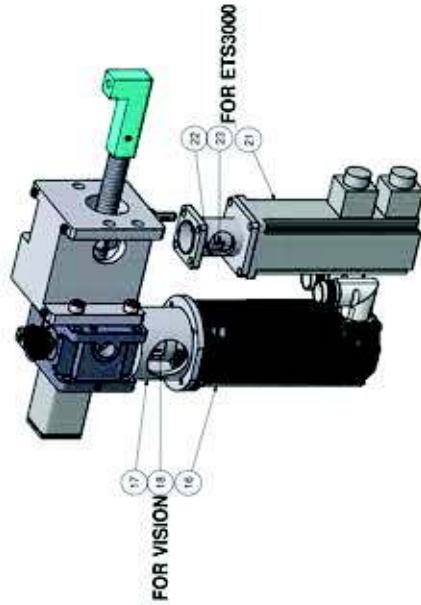
ACCURPRESS	
DWG #	DESCRIPTION
11.6	SHEET FOLLOWER BRAKE ASSEMBLY

A.18 Accurcrown Crownable Die Holder (Optional)

35	FLAT HEAD SOCKET SCREW
34	SOCKET HEAD CAP SCREW
33	HANDLE BAR
32	BEARING, BALL DBL ROW ANGULAR
31	BEARING, SLEEVE BUSHING
30	SHAFT
29	L.E.D. READ OUT COVER
28	L.E.D. DIGITAL DISPLAY
27	HANDLE MOUNT
26	POTENTIOMETER LINK
25	+/- 9V POWER SUPPLY
24	VARIABLE RESISTOR
23	LINEAR POTENTIOMETER
22	POTENTIOMETER MOUNT
21	BLOCK SUPPORT END
20	CHANNEL, UPPER
19	CHANNEL, LOWER
18	PLASTIC BUMPER
17	PLASTIC BUMPER
16	CONVEX WEDGE
15	SOCKET HEAD CAP SCREW
14	STEEL WEDGE RACK
13	STEEL SPUR GEAR PINION
12	DIAL HUB WITH CHAMFER
11	WASHER, BELLEVILLE
10	SOCKET HEAD SHOULDER SCREW
9	SOCKET HEAD CAP SCREW
8	SOCKET HEAD CAP SCREW
7	T-NUT
6	JAM NYLON LOCK NUT
5	LEADSCREW, MANUAL / POWER
4	LINK ARM LEADSCREW
3	KEYTANG
2	BLOCK, DIE CENTERING
1	CONCAVE LINK
ITEM	DESCRIPTION

ACCURPRESS	
DESCRIPTION:	
MANUAL ACCURCROWN	
CROWNABLE DIE HOLDER ASSEMBLY	

ITEM	PART NUMB	DESCRIPTION	MATERIAL	DIMENSIONS	QTY
1	GMT70262A	ZMM- SCREW JACK 1:61 RATIO		Screw Jack - Z-S- SL	1
2	SHC6544A	SCREW SOCKET HEAD CAP	GR 8	M09.0x16.00MM	4
3	BM87016B	MOUNTING BLOCK	ALUMINUM	3.50X3.78X3.4.00	1
4	LAR3492E	LLG	1045 or 4150	0.75x0.01 430x0.250	1
5	COV70274A	LEAD SCREW COVER	ALUMINUM 6061	0.125 WALL 1.500 X 1.500 X 2.750 LONG	1
6	EPD95074A	SQUARE PLUG	BLACK PLASTIC	1.500 X 1.500	1
7	LSW70270A	PROXIMITY SENSOR SWITCH	GR 8	#10 24UNCL00.250 2A	6
8	SHS2564A	SCREW SET (SOCKET HEAD)	STEEL HEX BAR	0.625 LONG 0.750 HEX	1
9	NUT70286A	MEX- ROTATING DEVICE	GR 8.8 YZ ZINC PLATED	M08.0x25.00MM	4
10	SHC2029A	SCREW SOCKET HEAD CAP	SPRING STEEL	005.188 dia X 0.750	1
11	FPN33074A	SPRING PIN	18-4 METRIC THK	31mm Long	1
12	LSCT71625A	LEAD SCREW	COLD ROLL FERRI	0.4371 LONG 1.125 DIA	1
13	SRCT0267B	SET COLLAR		#10 24UNCL.375 2A GR 8	4
14	BHC30102A	BUTTON HEAD	BLACK PLASTIC	1.1875 DIA	1
15	EPD30407A	DOME PLUG	PURCHASED	03.150X5.500	1
16	MMT72286A	BECKHOFF MOTOR, AM3032.0E00	ALUMINUM	EKL 10A 1114 RM SERVOHOMAX	1
17	SMA71640A	SERVO MOTOR ADAPTOR		M05.0x14.00MM	1
18	CPD7148A	COUPLING		005.00x0.009 815x0.12.000	4
19	SHC2928A	SCREW SOCKET HEAD CAP	GR 8	14G COLD ROLL	1
20	COV7221A	SERVO COVER	BALDOR		1
21	MMT41514A	BSM 50	ALUMINUM 6061	2.680x2.27 LONG	1
22	SMA70263A	SERVO MOTOR ADAPTOR			1
23	CPD70264A	B-W SERVOHOMAX COUPLING			1



NO.	CODE	DESCRIPTION	UNIT	QUANTITY	REVISION
MATERIAL					
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ACCURPRESS ACCURCROWN SINGLE WIRE SERVO CROWNING VISION ETS3000 ASSEMBLY					
STANDARD TOLERANCES: XX - 4.00% XXX - 0.010 XXX - 0.005 5 ± F UNLESS SPECIFIED					
DATE: 11/14/2011 DRAWN BY: PM CHECKED BY: PM DESIGNED BY: PM PART NUMBER: CDH72919 REVISION: A SHEET: 1 OF 1					

REVISION	DESCRIPTION	DATE	BY	ECR

10/27/2011 9:41:00 AM C:\Users\pm\Documents\CDH72919.dwg



ACCURPRESS

INDEX

A

- Air bending, 2 - 2
 - Die to material thickness ratios, 2 - 3
 - Principles, 2 - 3
 - Tonnage chart, 2 - 4
 - Tonnage requirements, 2 - 3
- ANSI, 3 - 12 to 3 - 18
 - Press brake standards, 3 - 12
- Auto mode, 5 - 10

B

- Backgauge
 - Configurations, 1 - 4
 - Directions of motion, 1 - 5
 - Finger calibration, 4 - 12
 - Premium, 1 - 4
- Backgauge calibration
 - Premium backgauge, 8 - 7 to 8 - 11
 - Backgauge Calibration Status screen, 5 - 23
 - Backgauge Fast Cycle screen, 5 - 20
 - Backgauge retract distance field, 5 - 32
 - Backgauge Retract Offset Distance (RY), 5 - 17
 - Backgauge target position field, 5 - 31
- Backstop bar
 - Alignment on premium backgauge, 8 - 8 to 8 - 10
 - Calibration on premium backgauges, 8 - 8
- Bend allowance, 2 - 8, 5 - 15
 - BndAL, 5 - 18
 - Formulas, 2 - 9
- Bend key, 5 - 12
- Bend point program position (BND), 5 - 29
- Bottom bending, 2 - 2

C

- Calibration sequence, 5 - 21 to 5 - 24
 - Backgauge, 5 - 23
 - Press ram, 5 - 21
- Catalog screen, 5 - 28
- Clear key, 5 - 11
- Coining, 2 - 3
- Completed Backgauge Calibration Screen, 5 - 24
- Control modes, 5 - 8
 - Foot, 3 - 3, 5 - 8
 - Hand, 3 - 3, 3 - 6, 5 - 8
 - Hand/Foot, 3 - 3, 5 - 9
- Current backgauge step number field, 5 - 30
- Current X-Backgauge position field, 5 - 30

Current Y-Ram position field,
5 - 30

D

Data input

- Capture method, 5 - 29
- Numerical entry method,
5 - 29

Decimal key, 5 - 11

Die

- Adjustable, 2 - 6
- Aligning, 3 - 6
- Fastening, 3 - 6, 6 - 5
- Four Way, 2 - 5
- Handling, 3 - 6
- Installation, 3 - 5, 6 - 3
- Precision ground and
hardened, 2 - 7
- Removal, 3 - 5, 3 - 7, 6 - 2

Die area, 3 - 1

Die holders

- Crownable, 2 - 8
- Four way, 2 - 8
- Standard, 2 - 7

Disconnect switch, 4 - 10, 7 - 1

Down Limit light, 5 - 5

E

Edit keylock selector switch,
5 - 3

Electrical power connection,
4 - 10 to 4 - 11

Electrical system overload
protection, 7 - 2

Enable/Disable backgauge step
advance, 5 - 30

ETS basic system

- Main menu screen, 5 - 13

ETS control

- Configurations, 5 - 1
- Description, 5 - 1
- Station details, 5 - 2

ETS function keys, 5 - 10 to
5 - 12

- 0 - 9 keys, 5 - 11
- Bend key, 5 - 12
- Clear key, 5 - 11
- Decimal key, 5 - 11
- Exit key, 5 - 11
- High key, 5 - 12
- Plus and Minus keys,
5 - 12
- Right and Left arrow keys,
5 - 11
- Slow key, 5 - 12

ETS100

- Configuration, 5 - 1
- Exit screen, 5 - 32
- Main menu screen, 5 - 13
- Saving a program, 5 - 33

ETS200

- Configuration, 5 - 1
- Exit screen, 5 - 33
- Main menu screen, 5 - 14
- Saving a program, 5 - 33

Exit key, 5 - 11

F

Factory Parameters screen, 5 - 19

Fast Calibration (FastCL), 5 - 15

Finger calibration

- Premium backgauge,
8 - 11 to 8 - 12

Flat panel development, 2 - 9

- Calculation, 2 - 9

Footswitch

- Safety, 3 - 3
- Treadle cover, 3 - 3
- Treadle latch, 3 - 3

Foundation details

- Models 717510 to 750014,
4 - 6
- Models 7606 to 713014,
4 - 4

Fuses, 7 - 2

G

Gauge Active light, 5 - 4

Gauge Enable button, 5 - 4

Golden rule, 3 - 2

Ground connected indicator test
button, 4 - 12, 7 - 1

Ground connected indicator
wiring, 4 - 12

Ground wire, 4 - 10

H

Help, On-screen, 5 - 36

High key, 5 - 12

High point program position
(HI), 5 - 29

Hydraulic fluid, 4 - 9, 9 - 5 to
9 - 7

- Filtration, 9 - 7

Level, 9 - 6

Replacement, 9 - 6

Suggested brands, 9 - 6

Hydraulic reservoir
 Capacities, 9 - 6
 Draining, 9 - 6
 Hydraulic system, 1 - 1, 9 - 3

I

Inside formed radius, 2 - 9
 Installation, 6 - 2

J

Jog mode, 5 - 9

K

Keys, 5 - 11

L

LazerSafe, 3 - 22
 Lifting, Press brake, 4 - 2
 Forklift, 4 - 2
 Rigging equipment, 4 - 2
 Spreader bar with slings,
 4 - 2
 Light curtain, 3 - 19
 Detail, 3 - 21
 Fault condition, 3 - 20
 Muting point setup, 3 - 19
 Muting position, 3 - 20
 Operator/Helper
 responsibilities, 3 - 19
 Owner/Employer
 responsibilities, 3 - 19
 Limit switches, 7 - 3 to 7 - 4
 Ram down limit, 7 - 3
 Ram up limit, 7 - 3

Torsion limiting system,
 7 - 4

Lockout/Tagout, 3 - 5, 3 - 8,
 4 - 10

Lubrication, Mechanical system,
 9 - 1 to 9 - 3
 Backgauge acme screw,
 9 - 3
 Backgauge ballscrew, 9 - 2
 Main motor, 9 - 2

M

Main menu screen, 5 - 13 to
 5 - 14
 Calibrate backgauge,
 5 - 13
 Calibrate ram, 5 - 13
 Catalog mode, 5 - 14
 ETS, 5 - 13
 ETS100, 5 - 13
 ETS200, 5 - 14
 Run mode, 5 - 13
 Maintenance, 3 - 7
 Personnel, 3 - 7
 Manual mode, 5 - 10
 Material Safety Data Sheet
 (MSDS), 4 - 9
 Material specification, 2 - 11
 Metric setting, 5 - 17
 Motor overload, 7 - 2

N

Neutral axis, 2 - 8, 2 - 9

O

Operating modes, 5 - 9 to 5 - 10
 Auto, 5 - 10
 Jog, 5 - 9
 Manual, 5 - 10
 Operator controls
 Multiple, 3 - 3
 Safety, 3 - 3
 Operator Parameters screen,
 5 - 14 to 5 - 19
 Backgauge Retract Offset
 Distance (RY), 5 - 17
 Bend Allowance (BndAL),
 5 - 18
 Bend Allowance field,
 5 - 15
 ETS, 5 - 14
 ETS100, 5 - 14
 ETS200, 5 - 15
 Fast Calibration (FastCL),
 5 - 15
 Metric setting, 5 - 17
 Ram Anticipation Factor
 (RmAnt), 5 - 16
 Ram Delay (RmDly), 5 - 15
 Slow Ram Return
 (SLRRet), 5 - 16
 Tonnage Limit Advance
 (TnLmOK), 5 - 16
 Variable Ram Speed
 (VRmSP), 5 - 18
 Operator/Helper
 Awareness, 3 - 3
 Clothing, 3 - 4
 Personal safety, 3 - 7
 Positioning, 3 - 4

OSHA, 3 - 8 to 3 - 11
Directive for point of
operation guarding, 3 - 9

P

Parts and assemblies drawings

Eccentric assembly, A - 6
Electrical cabinet back
panel layout, A - 24
Encoder assembly, A - 11
Hydraulic transmission
assembly, A - 15
Premium backgauge
assembly, A - 14
Press brake main
assembly, A - 2
Ram assembly, A - 4
Rocker arm assembly,
A - 3
Side frame assembly, A - 5
Ways box assembly, A - 9
Placement, Press brake, 4 - 3
Anchors, 4 - 3
Shimming, 4 - 3
Plus and Minus keys, 5 - 12
Point of operation, 3 - 1, 3 - 2,
3 - 3, 3 - 6
Power supply, 3 - 5, 4 - 9
Preparation, Press brake, 4 - 9
Protective rust inhibitor
removal, 4 - 9

Press Brake
Condition, 2 - 10
Features, 1 - 1
Forming practice, 2 - 10
General description, 1 - 2,
1 - 3
Hydramechanical, 2 - 1
Inspection, 4 - 1
Maintenance, 3 - 7
Mechanical, 2 - 1
Qualified operator, 2 - 11
Unattended, 3 - 4
Press braking, 2 - 1
Pre-Startup, 6 - 1
Program backgauge field, 5 - 30
Program Name, 5 - 27 to 5 - 28
Screen, 5 - 27
Program Number, 5 - 26
Program/Run mode, 5 - 24 to
5 - 34
Program/Run screen
ETS, 5 - 25
ETS100, 5 - 25
ETS200, 5 - 26
Saving, 5 - 32
Programmable logic controller
(PLC), 5 - 1
Punch installation
Hydraulic clamping system,
6 - 4
Mechanical clamping
system, 6 - 3
Punches, 2 - 6

Q

Quick Clamp system
Description, 8 - 14
Punch installation, 6 - 4
Punch removal, 6 - 2
Quick reference, Q - 1

R

Ram
Directions of motion, 1 - 5
Ram Active light, 5 - 4
Ram Anticipation Factor
(RmAnt), 5 - 16
Ram block, 3 - 5, 3 - 7, 4 - 9
Ram Delay (RmDly), 5 - 15,
5 - 35
Ram Delay button, 5 - 4
Ram Double Stop button, 5 - 5
Ram Enable toggle button, 5 - 3
Ram Offset Level buttons, 5 - 5
Ram parallel adjuster assembly
Models 175 tons and up,
5 - 6, 5 - 7
Models up to 130 tons,
5 - 6
Ram Up pushbutton, 5 - 3
Rear operated manual
backgauge, 8 - 14
Right and Left arrow keys, 5 - 11

S

- Safeguarding, 3 - 2, 3 - 3
- Safety, 3 - 1 to 3 - 20
 - Decal detail, 3 - 21
 - Hand tools, 3 - 4
 - Inspection, 4 - 12
 - Operation, 3 - 2
 - Work area, 3 - 4
 - Work practices, 9 - 1
- Sheet follower
 - Adjustments, 8 - 16
 - Description, 1 - 6
 - Lubrication, 9 - 12
 - Parts and Assemblies, A - 44
 - Safety, 3 - 25
- Shipping damage, 4 - 1
- Slow key, 5 - 12
- Slow point program position (SL), 5 - 29
- Slow Ram Return (SLRRet), 5 - 16, 5 - 35
- Start light, 5 - 3
- Start pushbutton, 5 - 3
- Start-Up
 - Precautions, 4 - 12
 - Screen, 5 - 13
- Stop pushbutton, 5 - 3
- Supply wires, 4 - 10

T

- Test bends, 6 - 5 to 6 - 6
- Test intervals
 - Control functions, 3 - 5

- Third party mode, 5 - 34
- Tonnage field (Tn), 5 - 35
- Tonnage Limit Advance field (TnLmOK), 5 - 16, 5 - 35
- Tonnage Limit field (TnLimit), 5 - 29, 5 - 34
- Tooling, 2 - 5
 - Centering, 6 - 5
 - Condition, 2 - 10
 - Flame Hardened, 2 - 5
 - General purpose, 2 - 5
 - Installation, 2 - 10
 - Ram positioning, 6 - 2
 - Rockwell hardness range, 2 - 5
 - Selection, 2 - 10
 - Storage, 3 - 4

- Torque limiting system, 1 - 1, 7 - 4

- Total backgauge steps field, 5 - 30

- Troubleshooting, 10 - 1 to 10 - 14
 - Diagnostic messages, 10 - 14
 - ETS error messages, 10 - 10
 - Forming variance, 10 - 8 to 10 - 9
 - Press brake malfunctions, 10 - 2 to 10 - 7

V

- Variable Ram Speed (VRmSP), 5 - 18, 5 - 36
- Variable ram speed control, 8 - 1

W

- Ways box, 9 - 8
 - Illustration: Models 7320 and up, 9 - 11
 - Illustration: Models smaller than 7100, 9 - 10
- Models 7250 and smaller, 9 - 8
- Models 7320 and up, 9 - 9