

ENERPAC 

POWERFUL SOLUTIONS. GLOBAL FORCE.

Instruction Sheet

Hydraulic Rail Puller Model RP120BP

TD013 Rev. C 03/26



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1.0 SAFETY

IMPORTANT - READ CAREFULLY

This manual contains important information on the correct installation, operation and maintenance of this equipment. All persons involved in the installation, operation and maintenance of this equipment must be thoroughly familiar with the contents of this manual. To safeguard against the possibility of personal injury or property damage, follow the recommendations and instructions of this manual. Keep this manual for reference.

- **ALWAYS** wear safety goggles and protective clothing during operation of this system.
- **NEVER** exceed the rated 2000 psi input pressure.
- **ALWAYS** inspect before each use all system parts for wear, distortion, cracks or improper fit.
- **NEVER** use a puller that is leaking oil; replace the leaking component before use.
- Non operating personnel should stand clear of the direction of force (directly in front of or behind the pullers) during the pull.
- **ALWAYS** be aware of pulling force & system pressure during the pull by monitoring the integrated tonnage (pressure) gauge while operating the system.
- Reapply dust caps to quick couplers when not in use.
- Relieve any trapped pressure from puller by shifting the control valves with the PTO off before connecting or disconnecting PTO lines.
- **WARNING:** Never disassemble any hydraulic connections on the rail puller to release trapped pressure. See Troubleshooting Guide for correct procedure to release trapped pressure in the rail puller hydraulic circuit.
- **WARNING:** Do not remove rail anchors or clips while the puller is under tension on the rail. If rail movement occurs as anchors or clips are removed, the puller rail grips could lose their grip on the rail, allowing the puller to slide rapidly and with extreme force along the rail in either direction. Serious personal injury and property damage could result if puller strikes persons or objects in its path.
- **WARNING: DAMAGE TO RAIL PULLER MAY OCCUR** - Prior to connecting any hoses to the Rail Puller, ensure that the Truck PTO settings are at 2,000psi and at 5 GPM of flow.
- **DO NOT EXCEED 2,000psi or 5 GPM** input to the RP120BP or damage to the booster will occur.

2.0 INTRODUCTION

CAPACITY: 120 TONS INPUT POWER REQUIRED: 5 GPM @ 2000 PSI

STUDY THE PULLER DIAGRAM 1, CONTROL DIAGRAM 2 AND INSTRUCTION DIAGRAM 3 TO UNDERSTAND FUNCTIONS AND FEATURES OF THE PULLER.

DIAGRAM 1 PULLER DIAGRAM

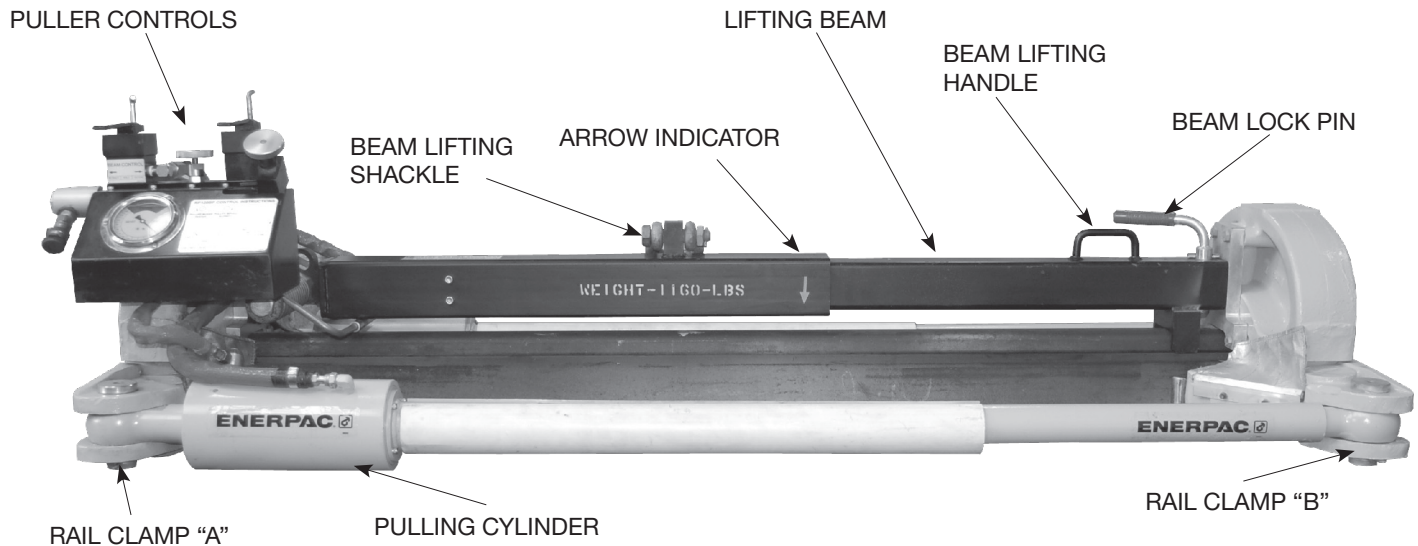
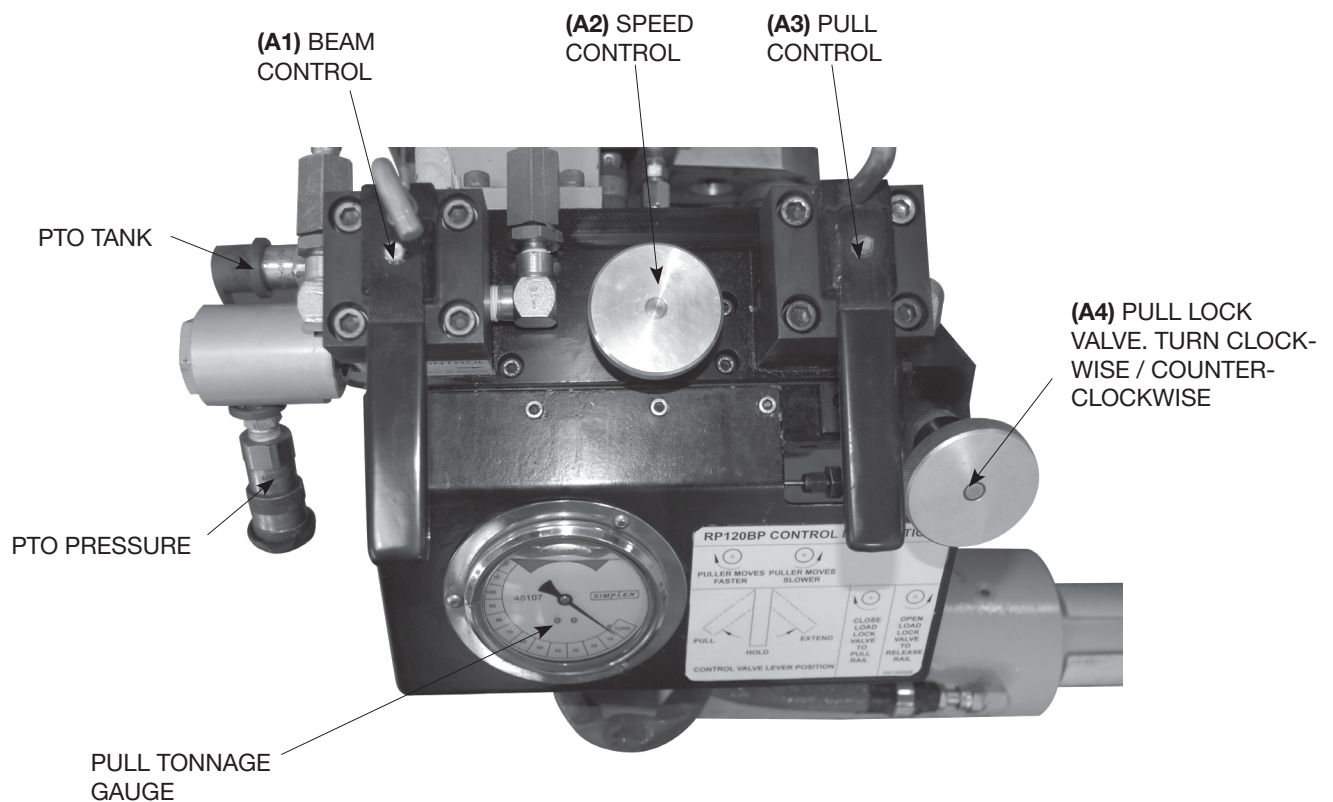
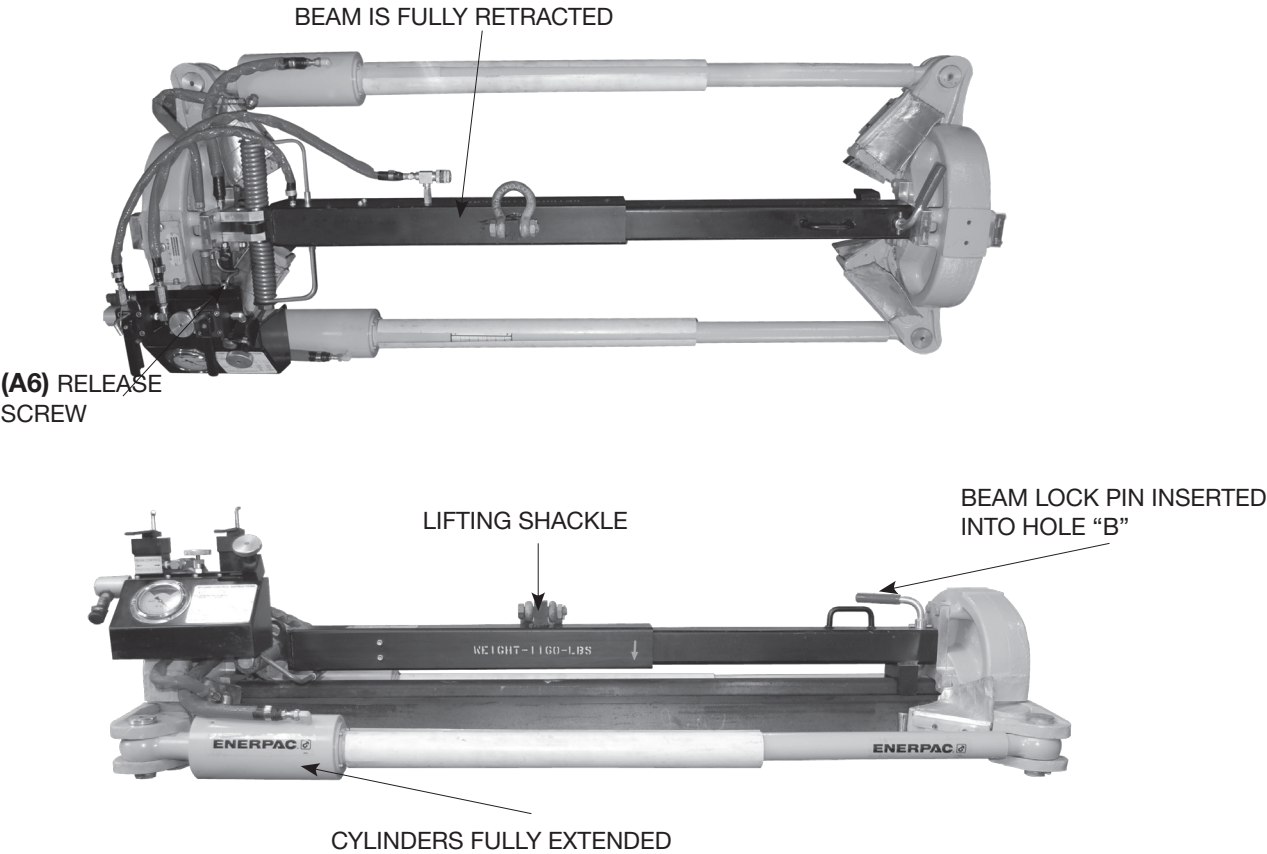


DIAGRAM 2 PULLER CONTROL DIAGRAM



2.0 INTRODUCTION

DIAGRAM 3 RAIL PULLER IN OPEN POSITION



3.0 OPERATING INSTRUCTIONS

PLACING THE PULLER ON THE RAIL AND PULLING THE GAP

THE PULLER SHOULD BE STORED AND TRANSPORTED WITH THE PULLER IN THE OPEN POSITION (PULL CYLINDERS FULLY EXTENDED AND CARRYING BEAM FULLY RETRACTED). THIS ALLOWS THE PULLER TO BE HOISTED DIRECTLY OFF THE WELD TRUCK AND OVER THE BALL OF THE RAIL AT THE NEXT WELD WITHOUT ADJUSTMENT. WHEN LOWERING THE PULLER ON THE RAIL CENTER, THE RED ARROW LOCATOR OVER THE RAIL GAP FOR OPTIMUM POSITIONING. CONNECT THE PTO PRESSURE AND TANK LINES TO THE COUPLERS PROVIDED ON THE PULLER AND TURN ON THE PTO. **(PTO SHOULD BE SET TO 5 GPM's.)** NOW THAT THE PULLER IS IN POSITION ON THE RAIL, TAKE THE FOLLOWING STEPS TO OPERATE THE PULLER.

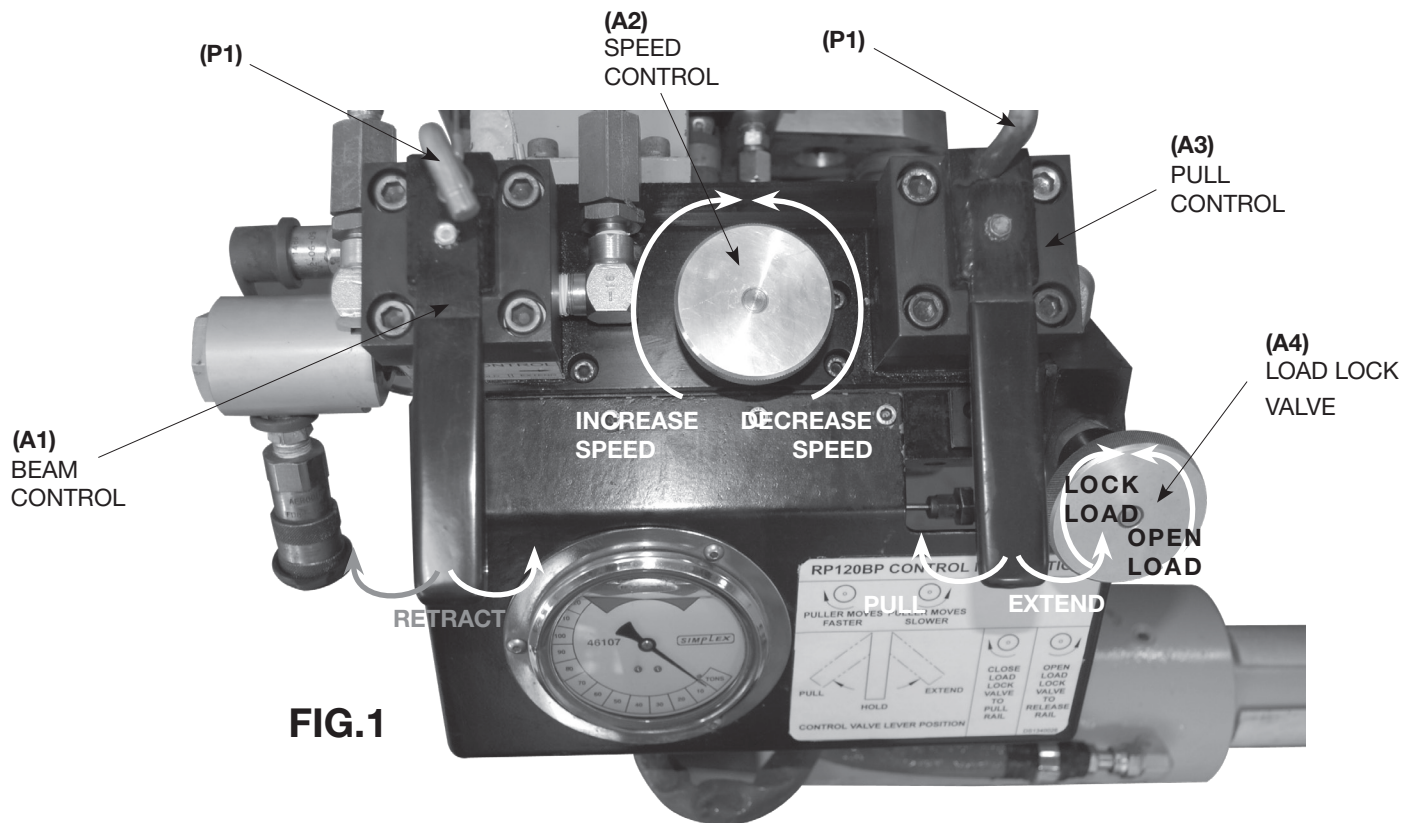


FIG.1

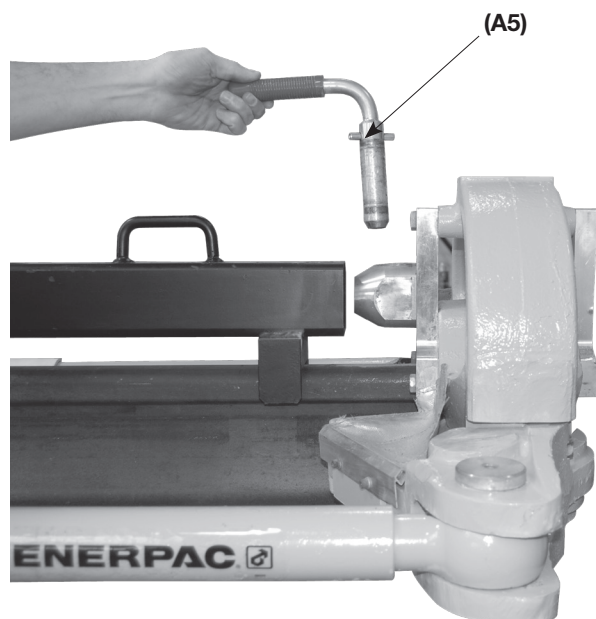


FIG.2

3.0 OPERATING INSTRUCTIONS (Continued)

PULLING THE GAP

NOTE: REMOVE THE LOCK PINS {(P1) IN FIG. 1} WHEN SHIFTING CONTROL HANDLES FOR SAFETY, REPLACE WHEN VALVES ARE NOT IN USE.

TO CLAMP THE RAIL WEB:

1. SHIFT THE BEAM CONTROL VALVE {(A1) IN FIG. 1} TO THE EXTEND POSITION.
2. TURN THE SPEED CONTROL VALVE {(A2) IN FIG. 1} CLOCKWISE UNTIL THE BEAM EXTENDS TO CLOSE AND SET THE SWING ARMS. AS SOON AS THE SWING ARMS ARE CLOSED, REOPEN THE CONTROL VALVE BY TURNING COUNTER CLOCKWISE.
3. CLOSE THE LOAD LOCK VALVE {(A4) IN FIG. 1} BY TURNING THE KNOB CLOCKWISE.

TO CLEAR THE BEAM:

4. REMOVE THE BEAM LOCK PIN {(A5) IN FIG. 2}.
5. SHIFT THE BEAM CONTROL VALVE {(A1) IN FIG. 1} TO THE RETRACT POSITION, AND TURN THE SPEED CONTROL VALVE {(A2) IN FIG. 1} CLOCKWISE UNTIL THE BEAM BEGINS TO RETRACT.
6. WHEN THE BEAM STOPS, SHIFT THE BEAM CONTROL VALVE {(A1) IN FIG. 1} BACK TO THE CENTER POSITION, AND REOPEN THE SPEED CONTROL VALVE {(A2) IN FIG. 1} BY TURNING COUNTER CLOCKWISE.
7. LIFT THE BEAM TO THE UPRIGHT POSITION. LOCK THE BEAM IN THE UPRIGHT POSITION BY REPLACING THE BEAM LOCK PIN {(A7) IN FIG. 3} IN THE PIVOT LOCK HOLE.

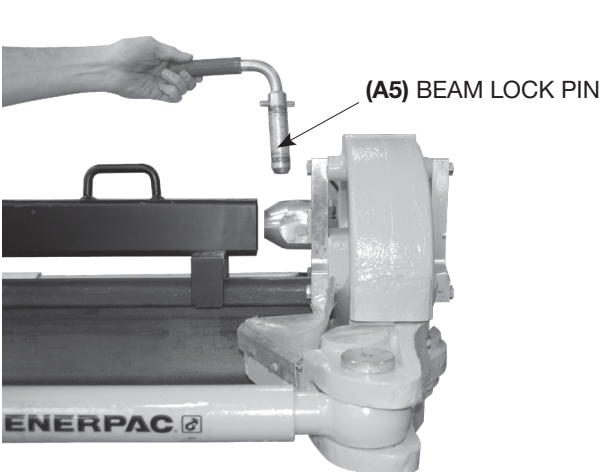


FIG. 2

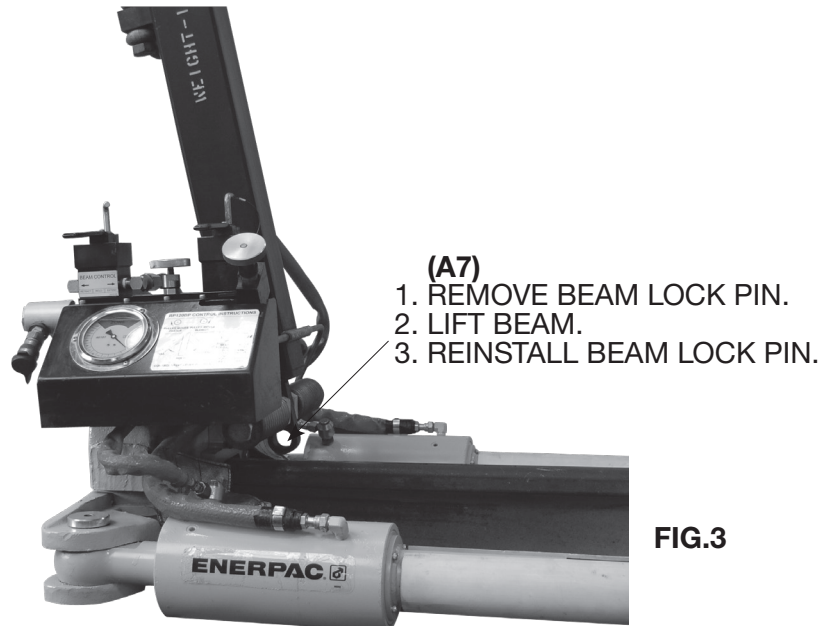


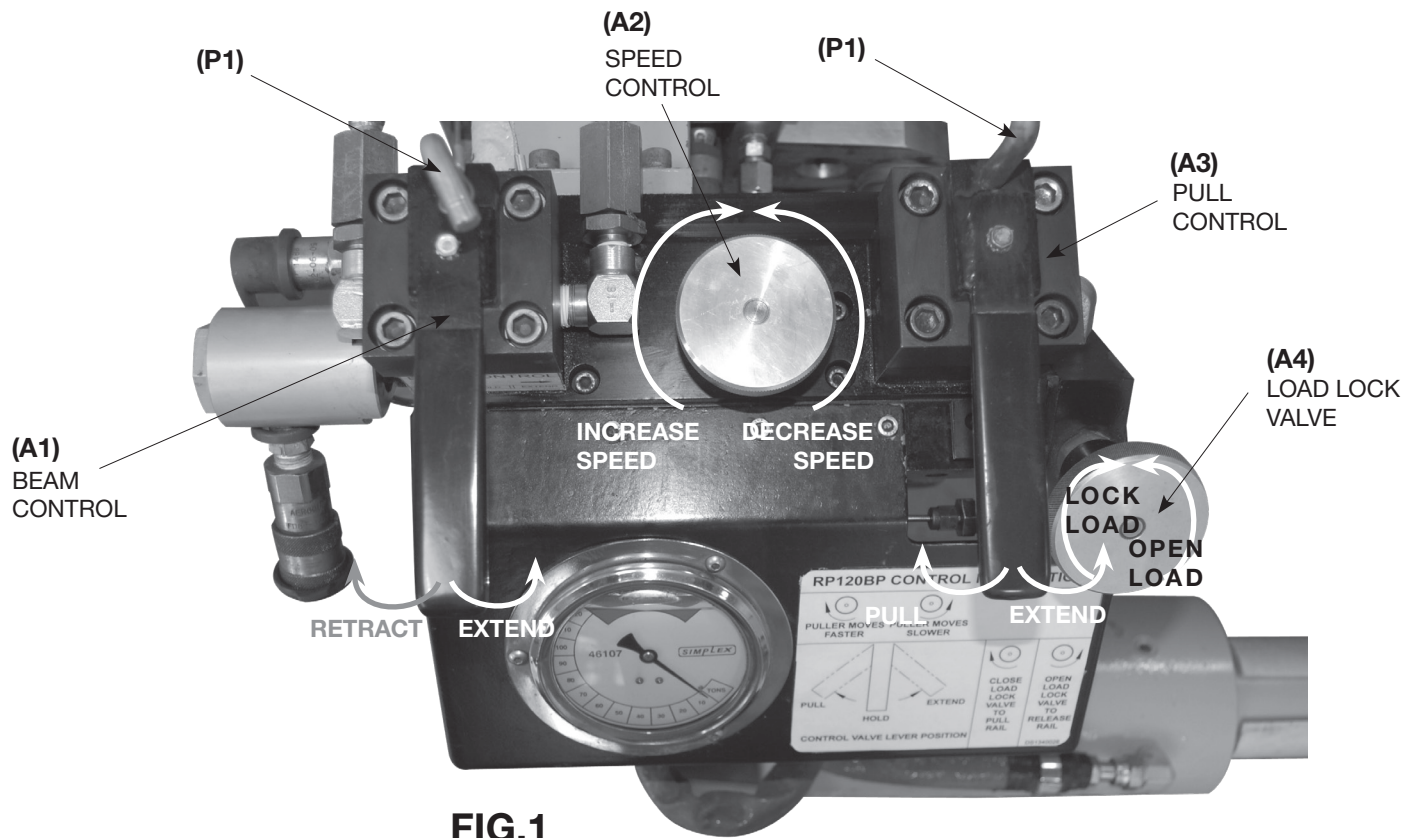
FIG.3

TO PULL THE GAP:

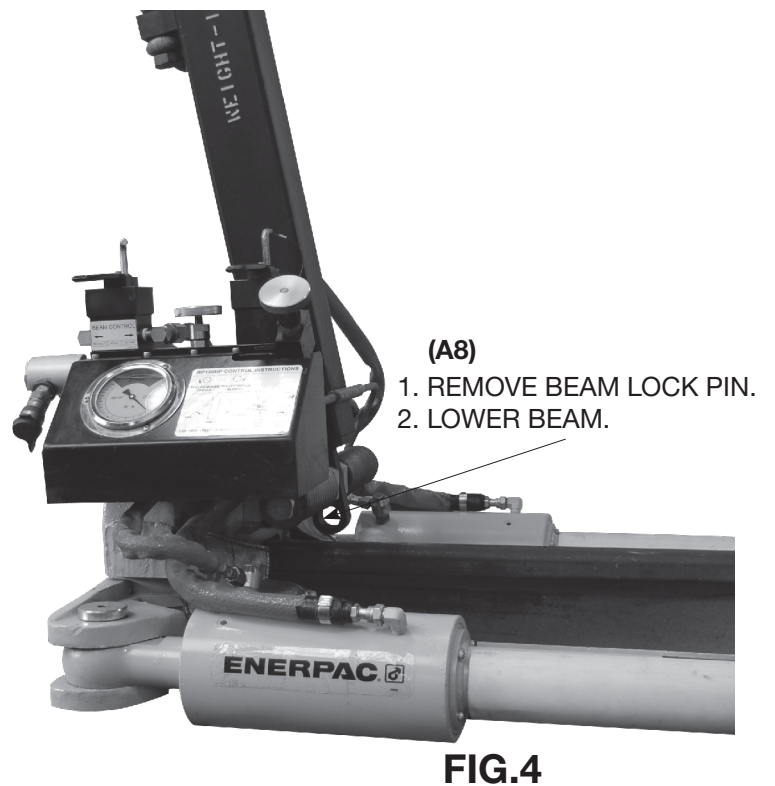
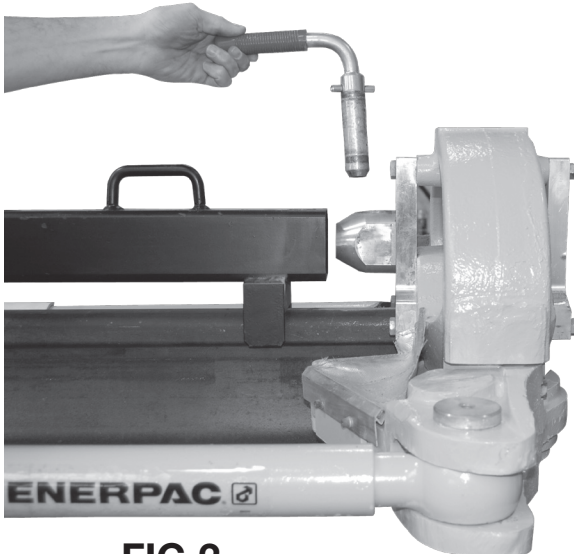
8. SHIFT THE PULL CONTROL VALVE {(A3) IN FIG. 1} TO THE PULL POSITION AND BEGIN TURNING THE SPEED CONTROL VALVE {(A2) IN FIG. 1} CLOCKWISE UNTIL THE PULLER BEGINS CLOSING THE GAP, MONITOR THE TONNAGE GAUGE FOR PULL FORCE.

NOTE: CONTINUING TO TURN THE SPEED CONTROL {(A2) IN FIG. 1} CLOCKWISE INCREASES THE SPEED AND FORCE OF THE PULL. TURN THE SPEED CONTROL VALVE {(A2) IN FIG. 1} COUNTER CLOCKWISE TO SLOW DOWN THE PULL FOR MEASURING AND CONTROLLING THE GAP IN THE FINAL STAGES OF PULL.

9. AS SOON AS THE GAP IS MADE, SHIFT THE PULL CONTROL VALVE {(A3) IN FIG. 1} BACK TO THE CENTER POSITION, AND TURN THE SPEED CONTROL VALVE {(A2) IN FIG. 1} COUNTER CLOCK WISE.



(A5) LOCK BEAM PIN



3.0 OPERATING INSTRUCTIONS (Continued)

RELIEVING PRESSURE:

WITH PTO OFF, SHIFT THE PULL CONTROL VALVE **{{A3} IN FIG. 1}** TO THE EXTEND POSITION. OPEN THE LOAD LOCK VALVE **{{A4} IN FIG. 1}** BY TURNING THE KNOB COUNTER CLOCKWISE. THE PRESSURE READING ON THE TONNAGE GAUGE SHOULD BE ZERO. SHIFT THE PULL CONTROL VALVE **{{A3} IN FIG. 1}** BACK TO THE CENTER POSITION.

REMOVING PULLER FROM RAIL:

1. REMOVE THE BEAM LOCK PIN **{{A8} IN FIG. 4}** AND LOWER THE BEAM BACK ONTO THE RAIL.
2. START PTO. SHIFT THE PULL CONTROL VALVE **{{A3} IN FIG. 1}** TO THE EXTEND POSITION. TURN THE SPEED CONTROL VALVE **{{A2} IN FIG. 1}** CLOCKWISE UNTIL THE PULL CYLINDERS EXTEND. AS SOON AS THEY REACH THEIR FULL EXTENSION, REOPEN THE SPEED CONTROL VALVE BY TURNING IT COUNTER CLOCKWISE. SHIFT THE PULL CONTROL VALVE **{{A3} IN FIG. 1}** TO THE CENTER POSITION.
3. SHIFT THE BEAM CONTROL VALVE **{{A1} IN FIG. 1}** TO THE EXTEND POSITION. TURN THE SPEED CONTROL VALVE **{{A2} IN FIG. 1}** CLOCKWISE UNTIL THE BEAM EXTENDS TO THE CLAMP. AS SOON AS THE BEAM REACHES THE CLAMP, REOPEN THE SPEED CONTROL VALVE BY TURNING IT COUNTER CLOCKWISE. SHIFT THE BEAM CONTROL VALVE **{{A1} IN FIG. 1}** TO THE CENTER POSITION.
4. WITH THE BEAM REATTACHED TO THE CLAMP REPLACE THE BEAM LOCK PIN **{{A5} IN FIG. 2}**.
5. SHIFT THE BEAM CONTROL VALVE **{{A1} IN FIG. 1}** TO THE RETRACT POSITION. TURN THE SPEED CONTROL VALVE **{{A2} IN FIG. 1}** CLOCKWISE UNTIL THE BEAM FULLY RETRACTS. AS SOON AS THE BEAM FULLY RETRACTS, REOPEN THE SPEED CONTROL VALVE BY TURNING IT COUNTER CLOCKWISE. SHIFT THE BEAM CONTROL VALVE **{{A1} IN FIG. 1}** TO THE CENTER POSITION.
6. TURN PTO OFF. SHIFT BOTH CONTROL VALVES BACK AND FORTH A COUPLE OF TIMES TO RELEASE ANY TRAPPED PRESSURE. ONCE THIS IS DONE, RETURN THEM TO THE CENTER POSITION AND REPLACE THE LOCK PINS.
7. DISCONNECT THE PTO PRESSURE AND TANK LINES.
8. REMOVE PULLER FROM RAIL BY HOISTING AT THE BEAM LIFTING SHACKLE.

4.0 TROUBLESHOOTING GUIDE

If the procedures listed below do not remedy the problem - the equipment will require service and should be taken to an Enerpac Authorized Service Center for repair.

Puller Fails to Operate.

1. Check pressure and tank connections for PTO.
2. Make sure PTO is turned on.
3. Check PTO for required pressure 2000 psi and flow 5 GPM minimum.
4. Close speed control valve.
5. Check cylinder hose connections.
6. Check for external leaks.
7. Take unit to Enerpac Authorized Service Center for repairs.

Puller Operates But Fails to Build Full 120 Tons of Pulling Force.

1. Check for required pressure 2000 psi and flow 5 GPM minimum.
2. Close speed control valve.
3. Check cylinder hose connections.
4. Check for external leakages.
5. Check for faulty gauge.
6. Take unit to Enerpac Authorized Service Center for repairs.

Puller Beam Will Not Retract to Open Puller.

1. Check pull indicator. If pull cylinders are at maximum extension, it will be necessary to operate the puller through several load and unload cycles until clamps have some play on the rail. Rocking the unit up and down is effective to shake the puller loose. Then retract the beam.

Unable to Connect or Disconnect PTO Lines.

1. Make sure the PTO is off.
2. Remove the lock pins. Shift both control valves through all positions.
3. Open the speed control valve all the way turning the knob counterclockwise.

Trapped Hydraulic Pressure in the Rail Puller Hydraulic Circuit.

4. Open the release screw valve{(A6) on Pg. 4} on the back of the intensifier manifold by turning counter clockwise 1 to 1.5 turns using pliers and a rag to protect yourself from possible oil spray. Shift both control valves{(A1) & (A3) in Fig. 1 on Pg. 5} through all positions to release remaining trapped pressure.

Rail Puller Hydraulically Locked on the Rail.

5.0 MAINTENANCE

1. Lubricate pivot points annually with anti-seize compound. Inspect and lubricate more often if needed.
2. Keep contact surfaces of swing arms and clamp brackets clean and oiled so swing arms move freely.
3. Inspect and clean grip teeth before each use.

VISIT WWW.ENERPAC.COM FOR REPAIR PARTS INFORMATION

