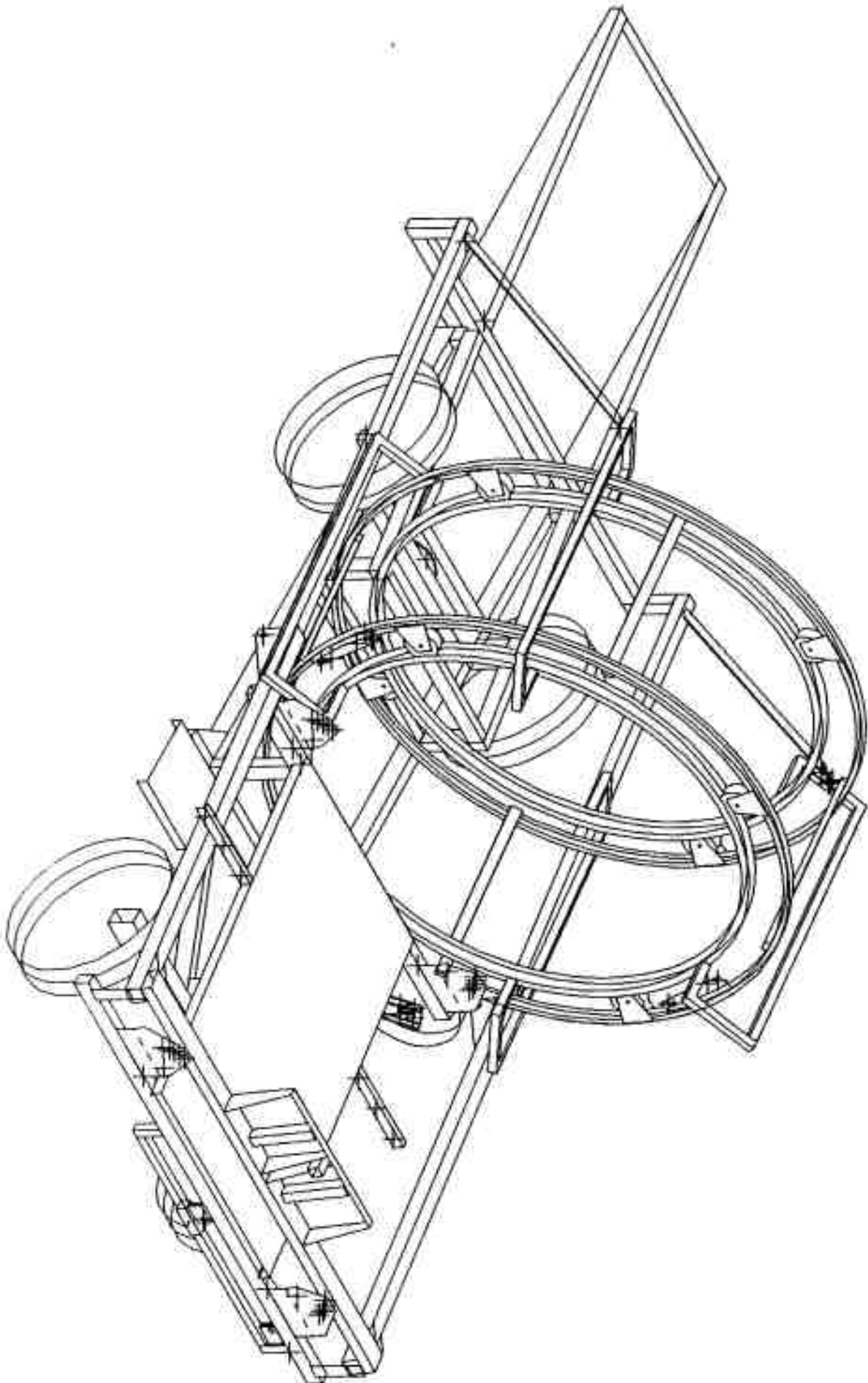
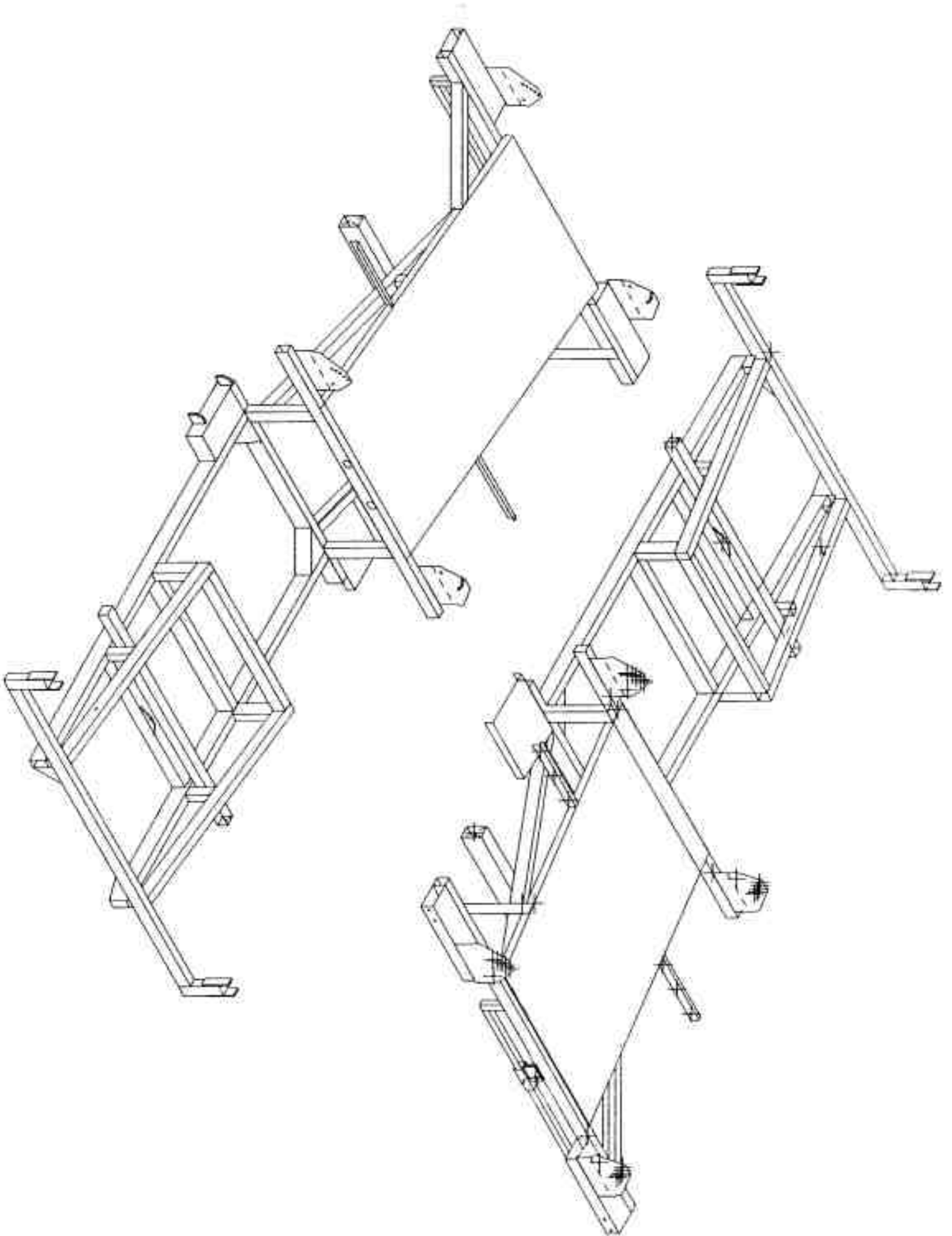


1997  
**Tube-Line 500**

**Parts and Service  
Manual and Automatic**



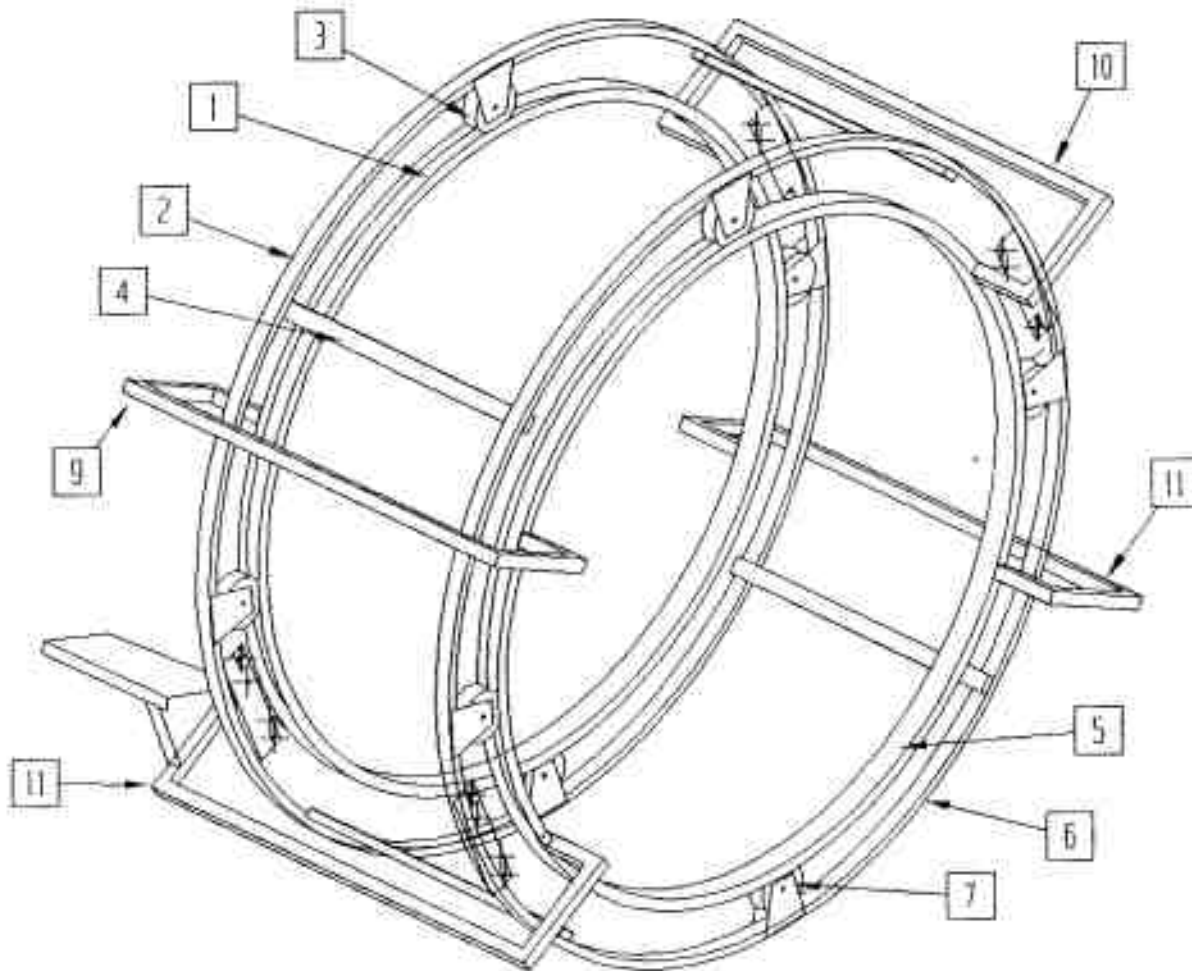


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Parts Manual  
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# Tube-Line 500

Wrap Chamber

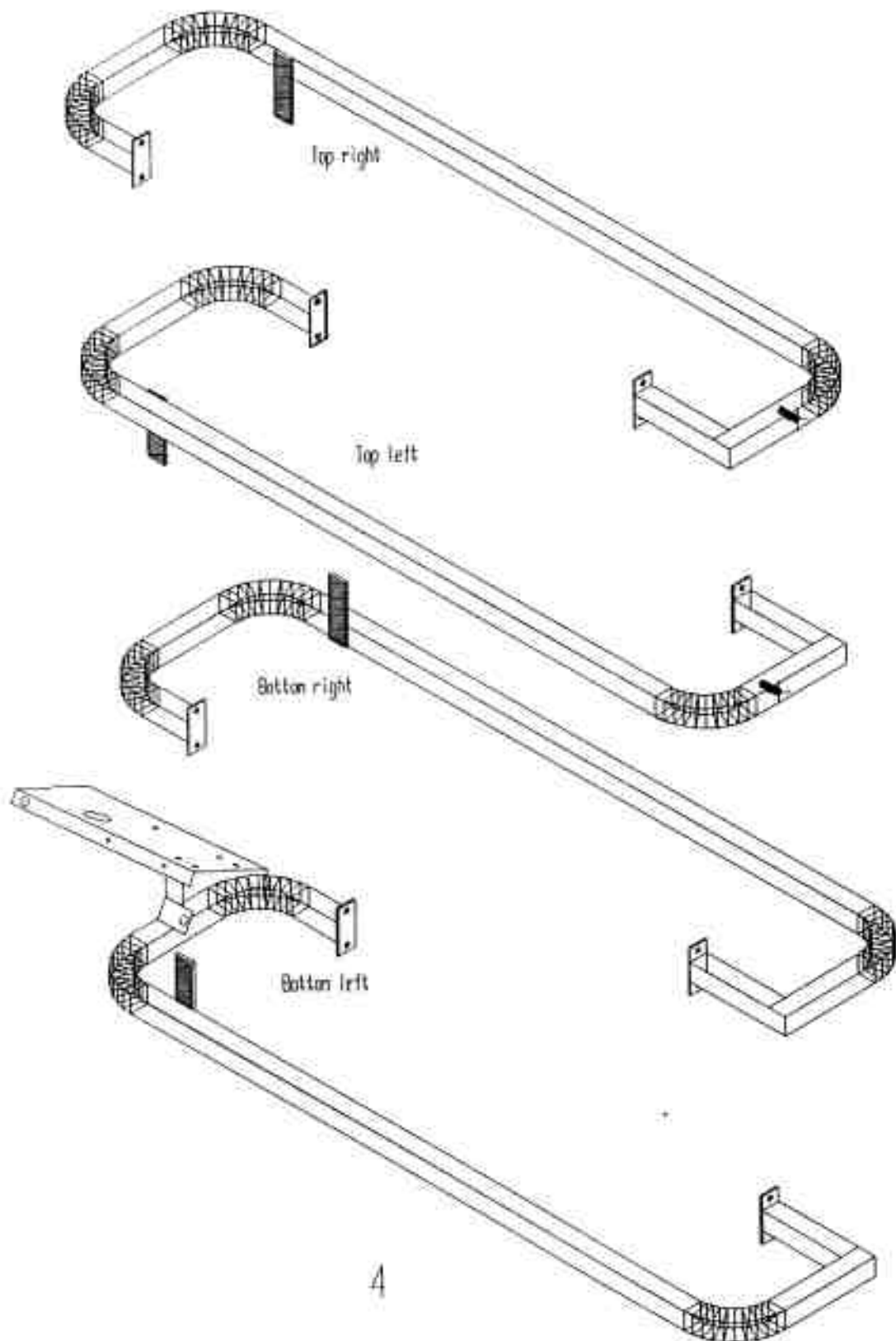


- 1 Front channel ring
- 2 Front Tube ring
- 3 Front Wheel 6 in
- 4 Ring Tie
- 5 Rear Channel ring
- 6 Rear Tube ring

- 7 Rear Wheel 4 in
- 8 Mounting Bolt 1/2 X 2 / nut / lockwasher
- 9 Top Left Hoop tie
- 10 Top Right Hoop tie
- 11 Botton Right Hoop tie
- 12 Botton Left Hoop tie

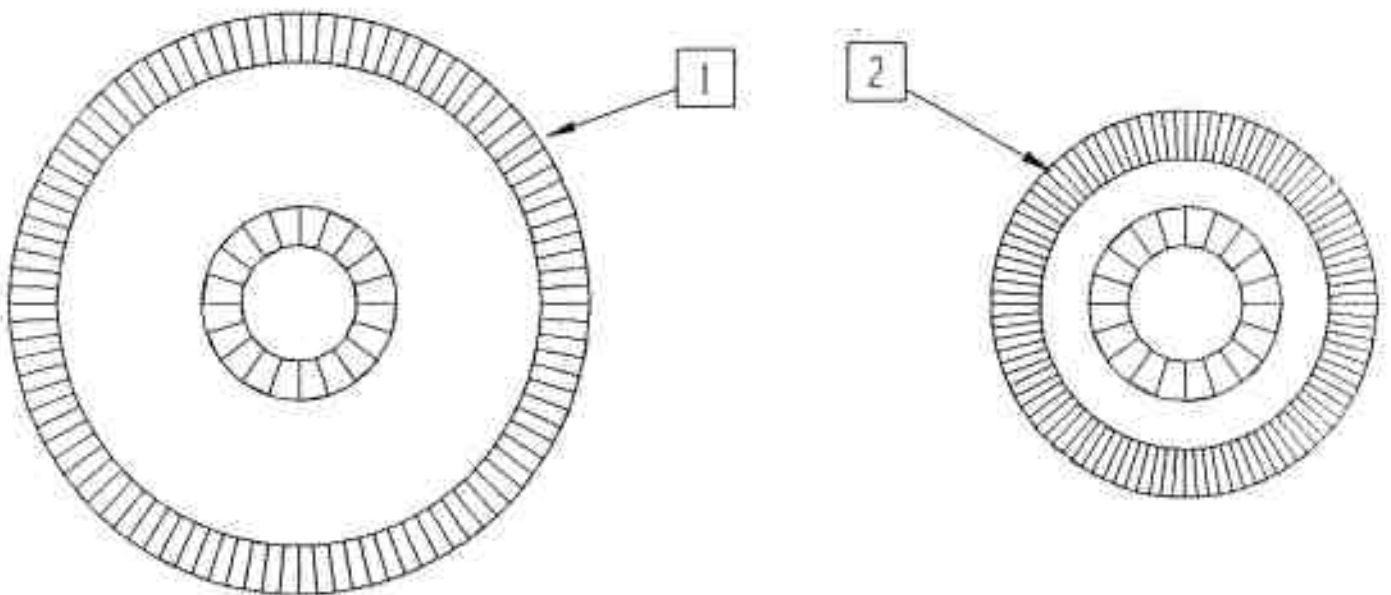
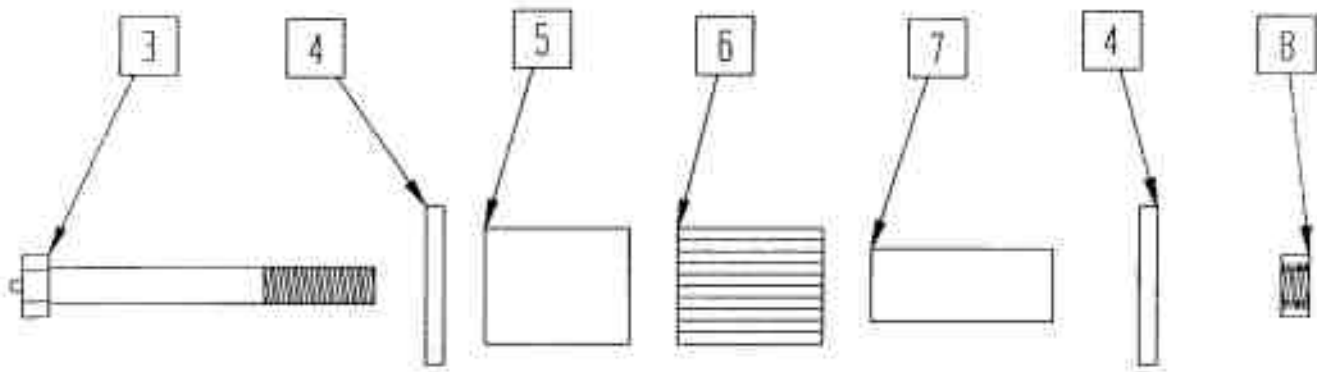
# Tube-Line 500

Hoop tie



# Tube-Line 500

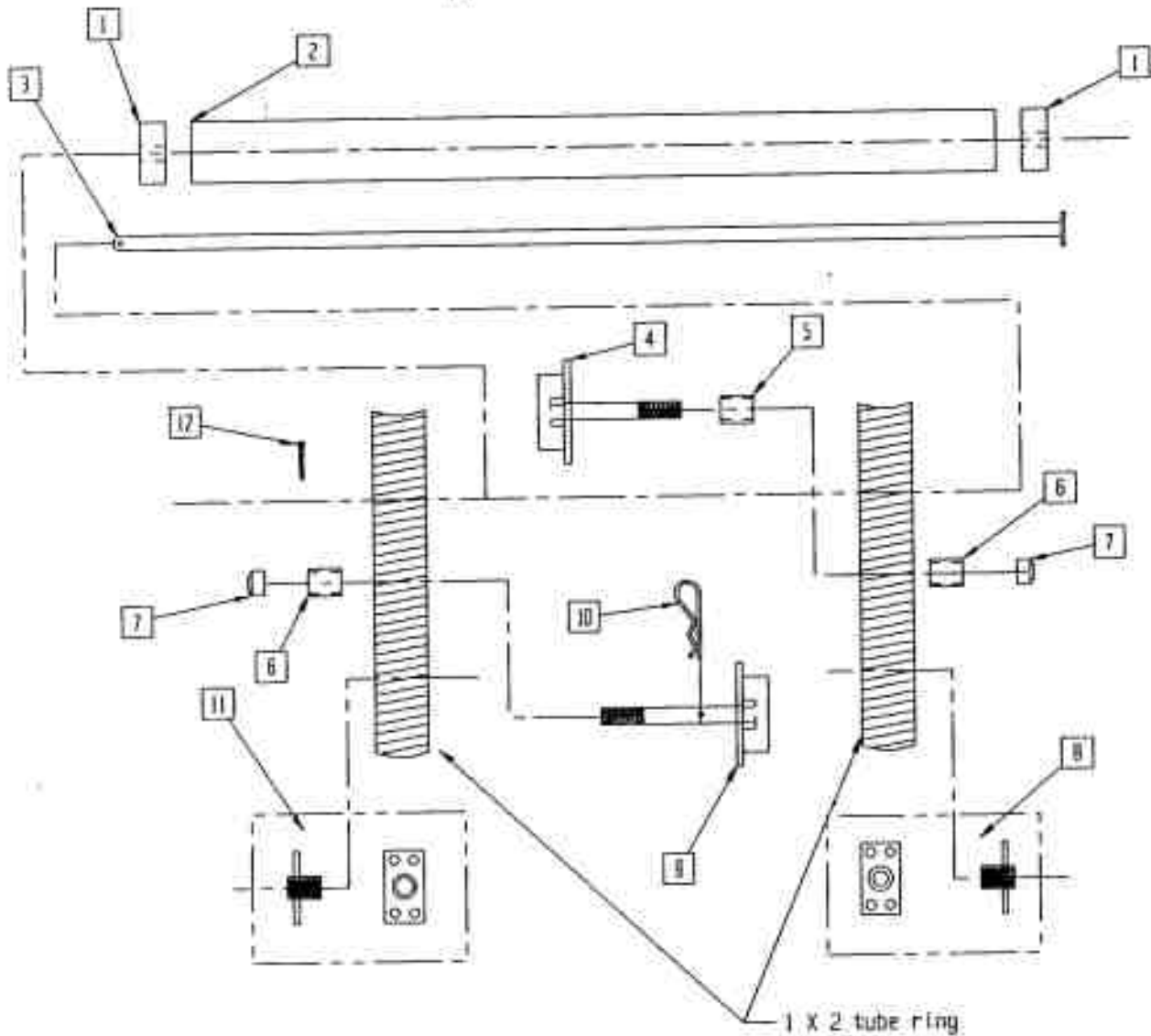
Hoop wheels



1	6 in wheel
2	4 in wheel
3	axle bolt
4	bearing seal
5	outer race
6	roller bearing
7	inner race
8	locknut

# Tube-Line 500

wrapper hardware



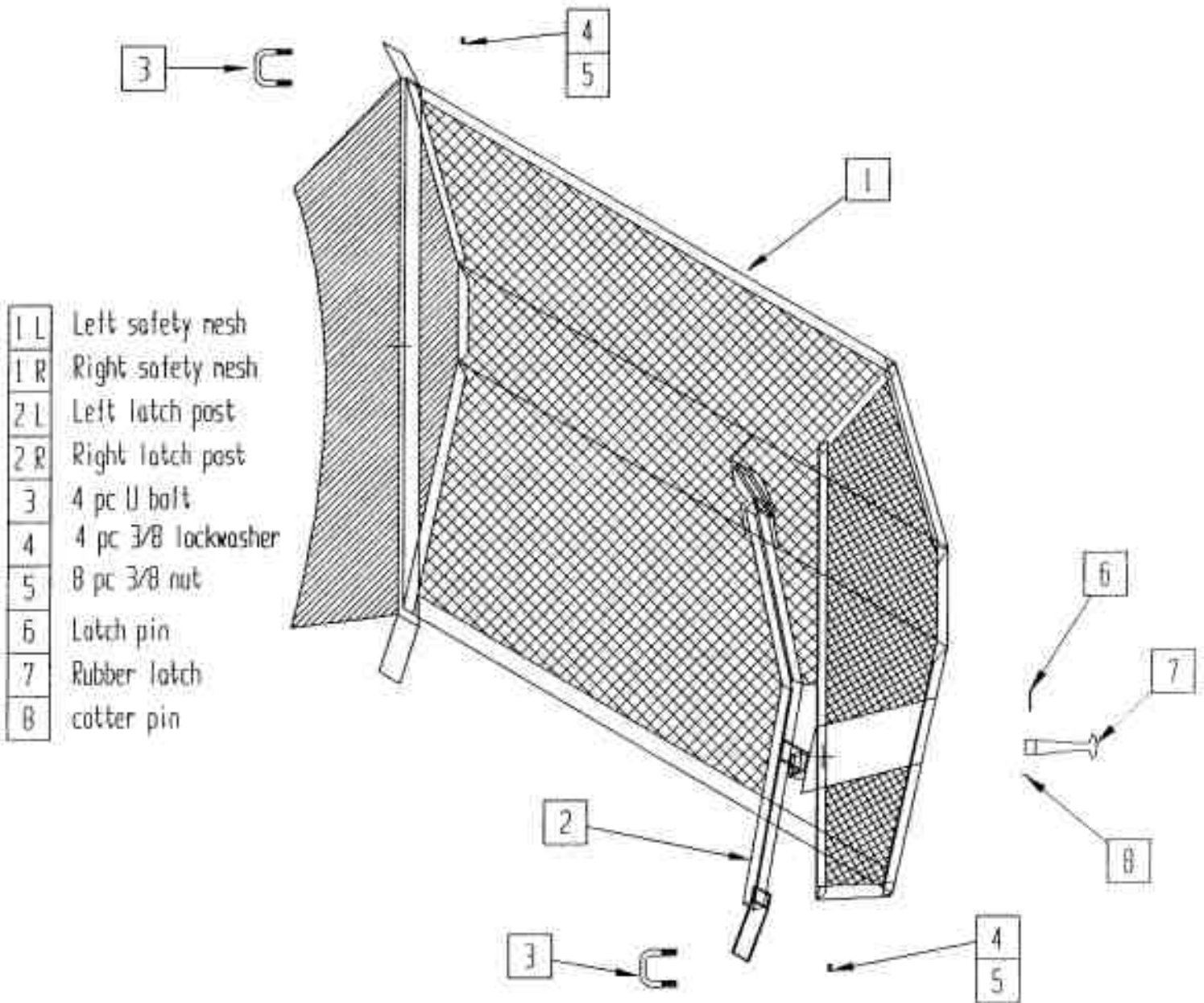
- |    |                               |
|----|-------------------------------|
| 1  | 2 in od X 9/16 id X 1 HMWPE   |
| 2  | 2 in ABS pipe                 |
| 3  | plastic roller pin            |
| 4  | plastic wrap spool            |
| 5  | spacer                        |
| 6  | Dilite bearing                |
| 7  | Nylon locknut                 |
| 8  | stretch wrap holder small end |
| 9  | plastic wrap spool            |
| 10 | hair pin                      |
| 11 | stretch wrap holder large end |
| 12 | cotter pin                    |

Use 5/8 & 1/2 flat washers as required



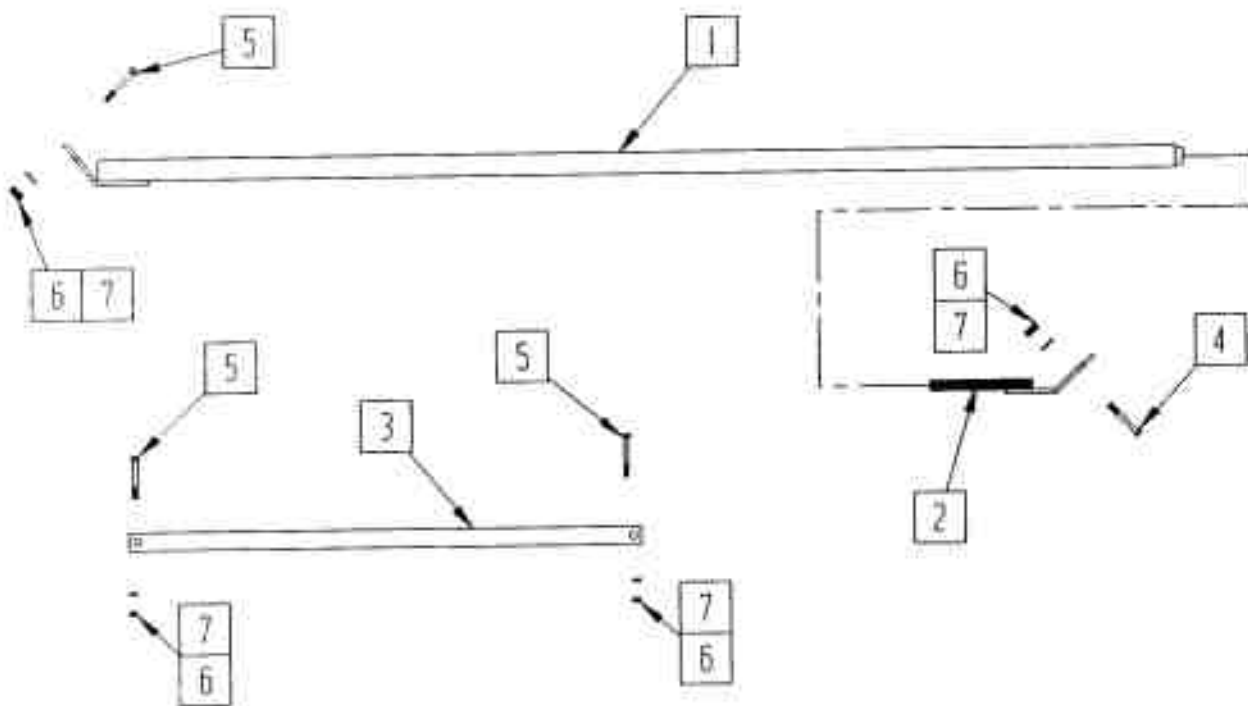
# Tube-Line 500

Safety mesh



# Tube-Line 500

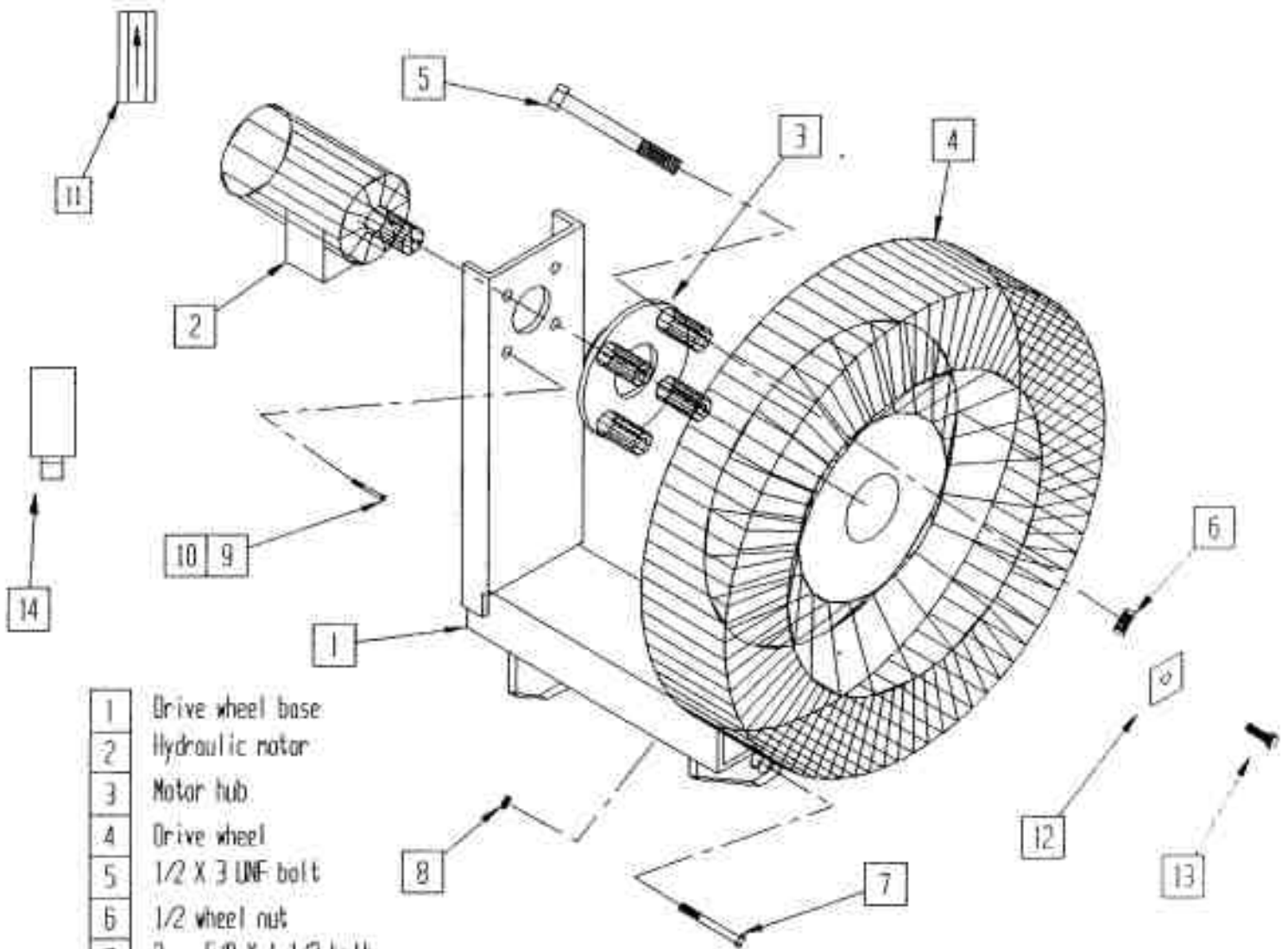
Wrop brace & valve brace



1	Bottom brace part
2	Top brace part
3	Valve brace
4	3/8 X 2 bolt
5	3/8 X 1 bolt
6	3/8 nut
7	3/8 lockwasher

# Tube-Line 500

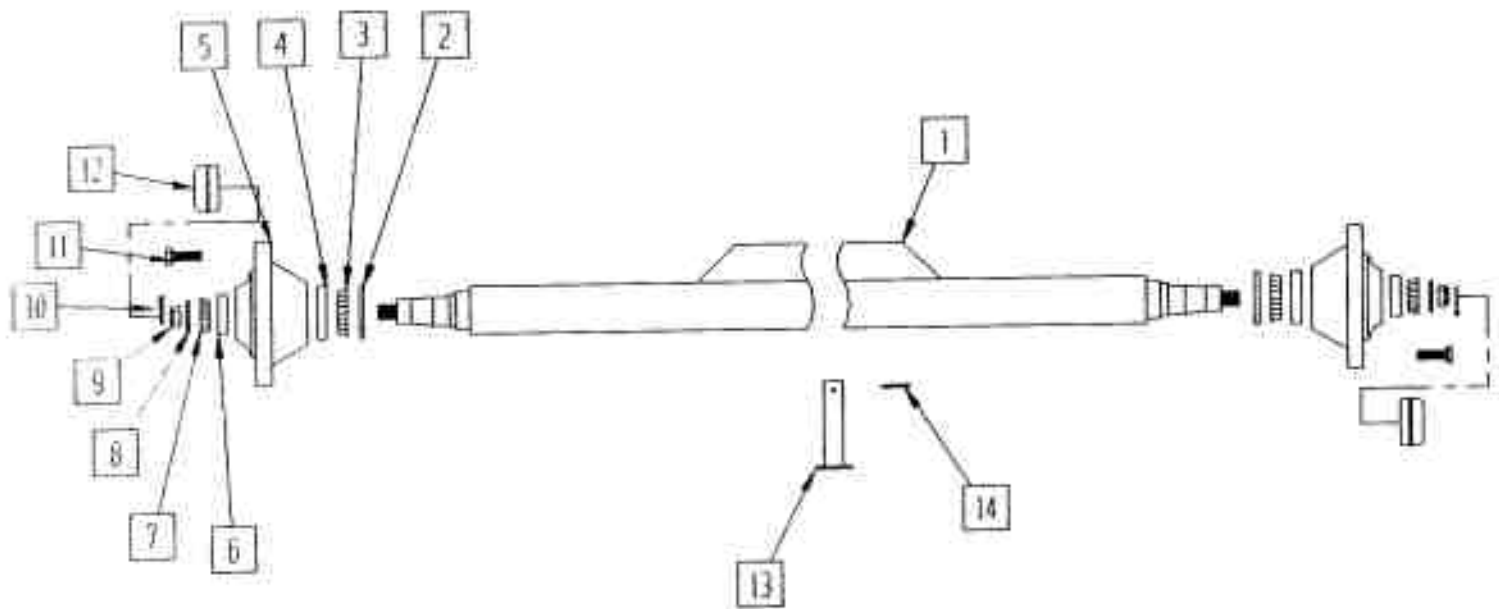
Drive wheel



- |    |                                  |
|----|----------------------------------|
| 1  | Drive wheel base                 |
| 2  | Hydraulic motor                  |
| 3  | Motor hub                        |
| 4  | Drive wheel                      |
| 5  | 1/2 X 3 UNF bolt                 |
| 6  | 1/2 wheel nut                    |
| 7  | 2 pc 5/8 X 1 1/2 bolt            |
| 8  | 2 pc 5/8 locknut                 |
| 9  | 4 pc 3/8 X 3/4 bolt              |
| 10 | 4 pc 3/8 lockwasher              |
| 11 | Check Valve (Manual model only)  |
| 12 | Washer                           |
| 13 | 1/4 X 1 bolt/lockwasher          |
| 14 | Relief Valve (Manual model only) |

# Tube-Line 500

Axle/spindle/hub

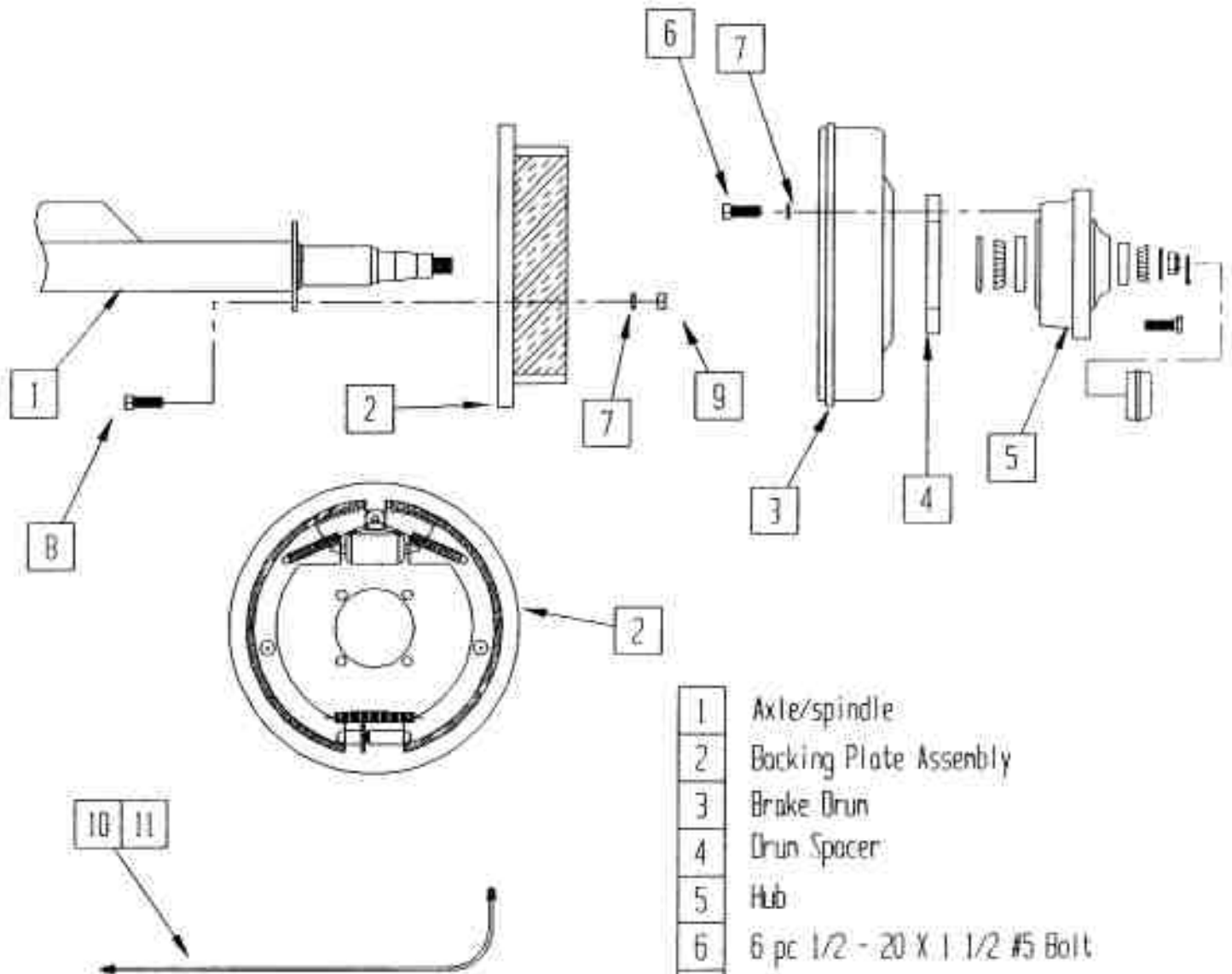


1	Axle
2	seal
3	inner bearing
4	inner bearing race
5	hub
6	outer bearing race
7	outer bearing
8	flat washer
9	wheel nut
10	cotter pin

11	wheel stud
12	dust cap
13	axle pin
14	cotter pin

# Tube-Line 500

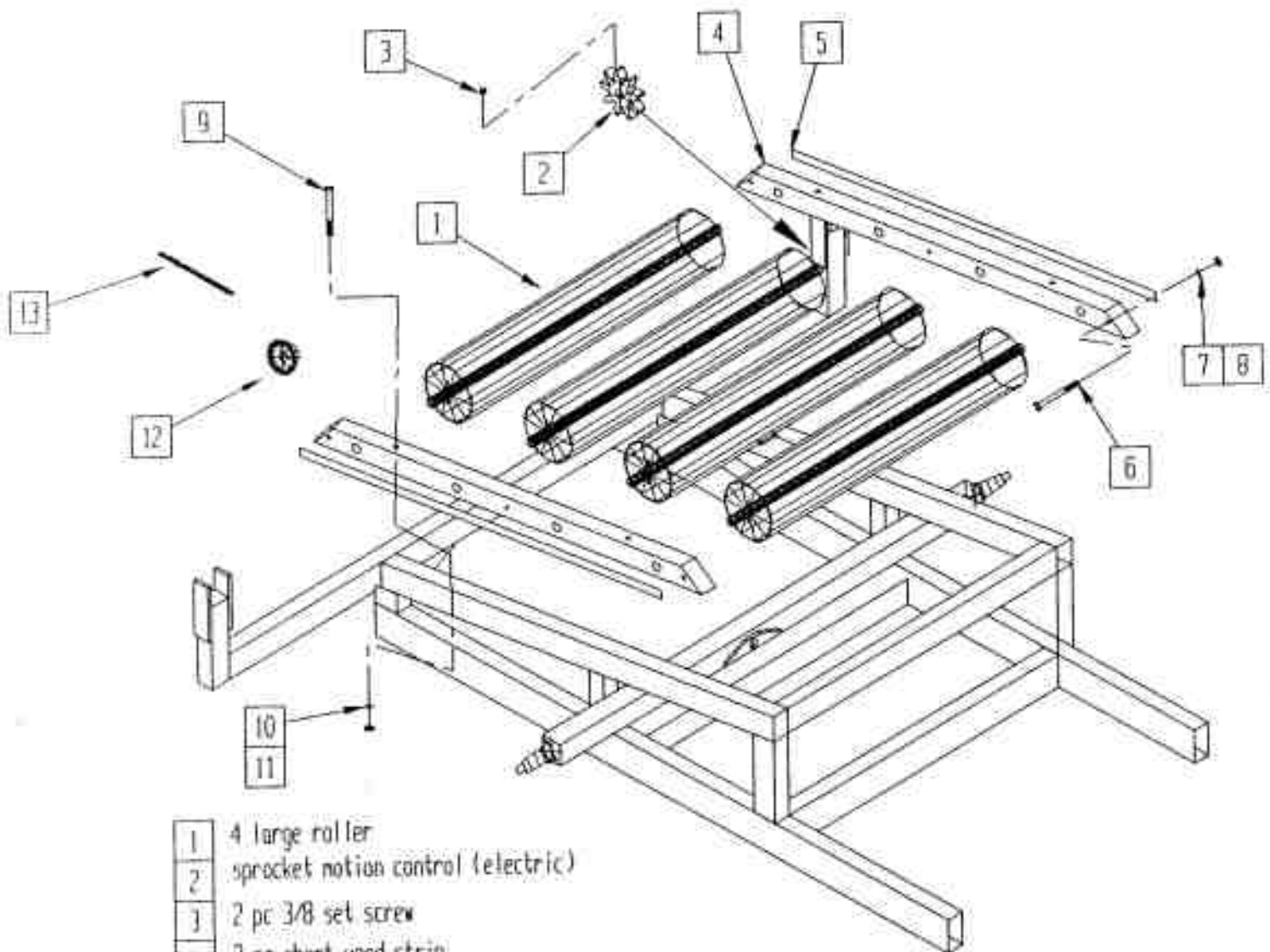
Axle/spindle/brake



- |    |                               |
|----|-------------------------------|
| 1  | Axle/spindle                  |
| 2  | Backing Plate Assenbly        |
| 3  | Brake Drum                    |
| 4  | Drum Spacer                   |
| 5  | Hub                           |
| 6  | 6 pc 1/2 - 20 X 1 1/2 #5 Bolt |
| 7  | 10 pc 1/2 Lockwasher          |
| 8  | 4 pc 1/2 - 20 X 1 1/4 #5 Bolt |
| 9  | 4 pc 1/2 - 20 Nut             |
| 10 | 3/16 Brake Line Right Side    |
| 11 | 3/16 Brake Line Left Side     |

# Tube-Line 500

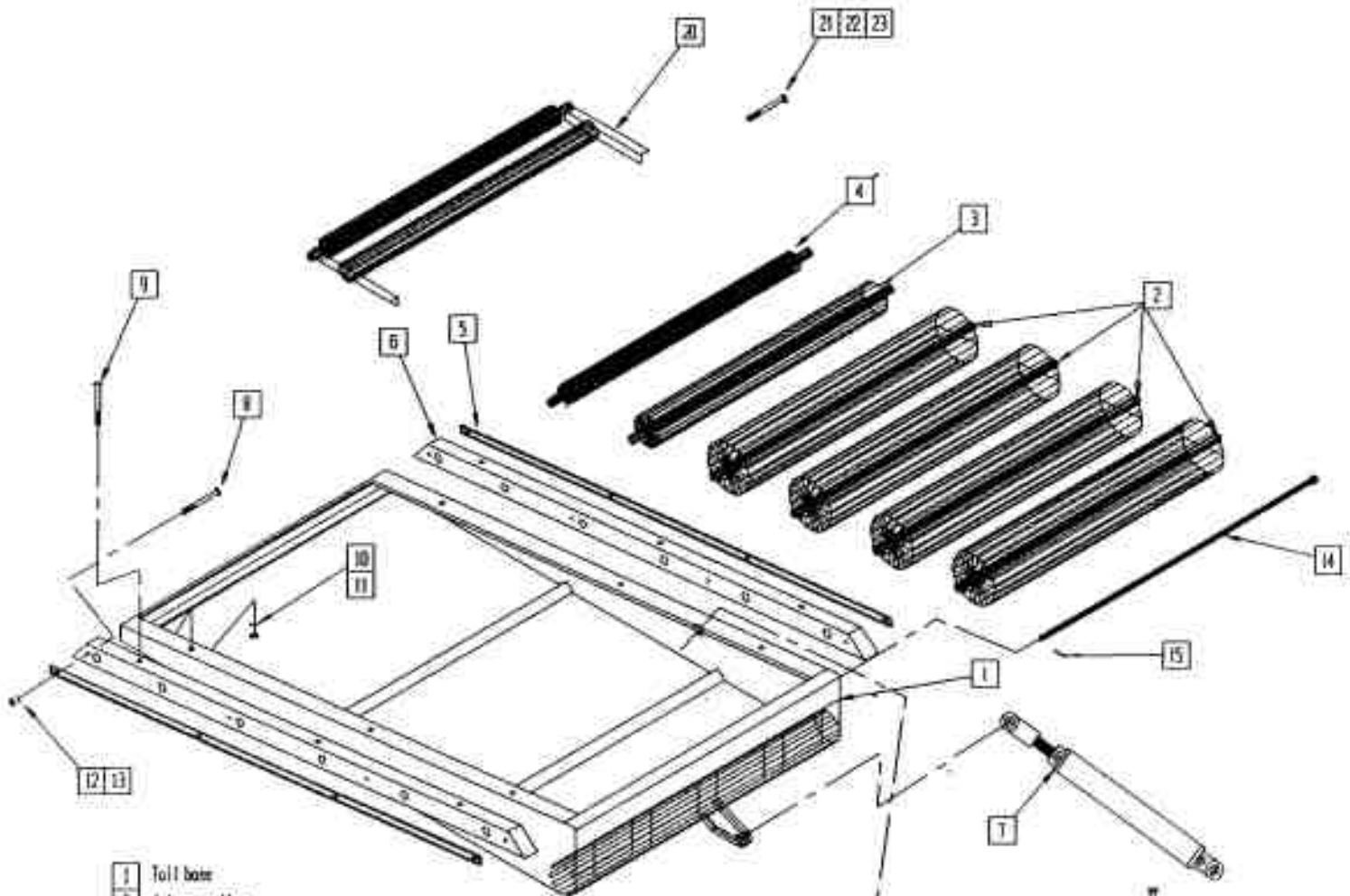
rear roller



- |    |   |
|----|---|
| 1  | 4 large roller                          |
| 2  | sprocket motion control (electric)      |
| 3  | 2 pc 3/8 set screw                      |
| 4  | 2 pc short wood strip                   |
| 5  | 1/4 X 1 retainer strip                  |
| 6  | 6 pc 5/16 X 3 carriage bolt             |
| 7  | 6 pc 5/16 Lockwasher                    |
| 8  | 6 pc 5/16 nut                           |
| 9  | 4 pc 1/2 X 6 carriage bolt              |
| 10 | 4 pc 1/2 lockwasher                     |
| 11 | 4 pc 1/2 nut                            |
| 12 | 2 pc 40B20 sprocket (Automatic only)    |
| 13 | 1 pc # 40 roller chain (Automatic only) |

# Tube-Line 500

## Tail

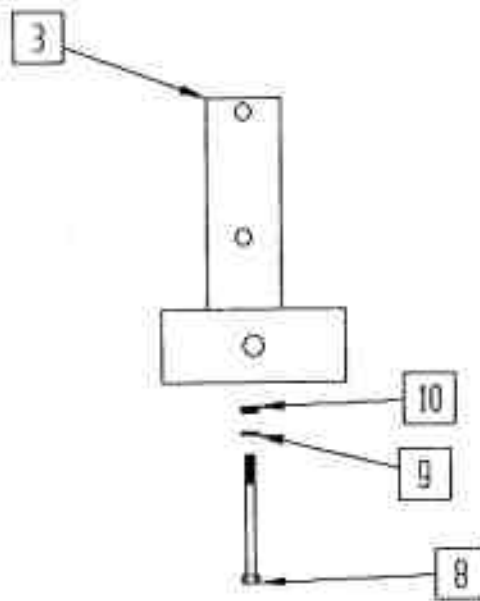
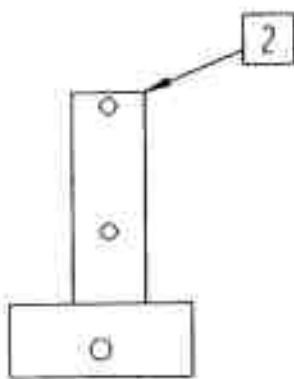
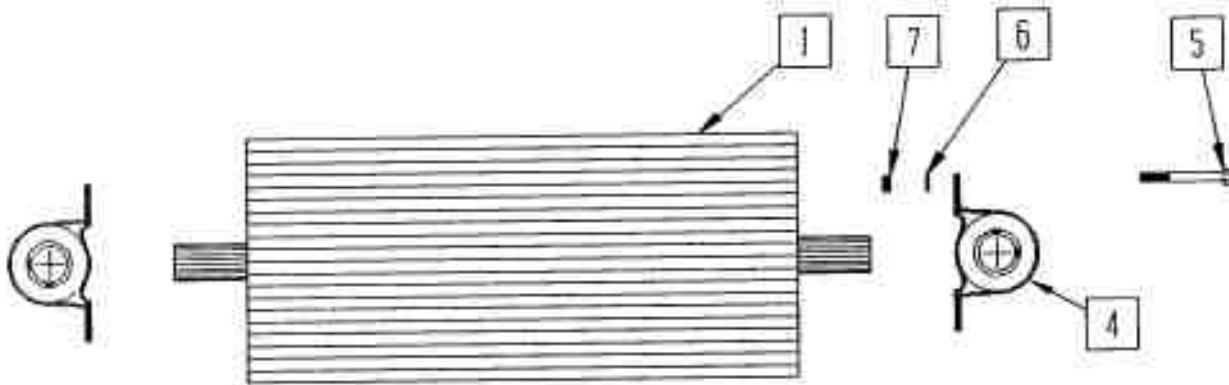


- |    |                                |
|----|--------------------------------|
| 1  | Tail base                      |
| 2  | 4 large roller                 |
| 3  | 1 pc 4 in roller               |
| 4  | 1 pc 2 3/8 roller              |
| 5  | 1/4 X 1 retainer strip         |
| 6  | flod strip                     |
| 7  | 2 X 15 hydraulic cylinder      |
| 8  | 8 pc 5/16 X 3 carriage bolt    |
| 9  | 6 pc 1/2 X 3 1/2 carriage bolt |
| 10 | 6 pc 1/2 lockwasher            |
| 11 | 6 pc 1/2 nut                   |
| 12 | 8 pc 5/16 lockwasher           |
| 13 | 8 pc 5/16 nut                  |
| 14 | Hinge pin                      |
| 15 | roller pin                     |

- |    |                       |
|----|-----------------------|
| 16 | tail tie bar          |
| 17 | Roller pin            |
| 18 | 3/4 X 5 bolt          |
| 19 | 3/4 locknut           |
| 20 | Rear Roller Extension |
| 21 | 4 pc 3/8 X 1 bolt     |
| 22 | 4 pc 3/8 Flatwasher   |
| 23 | 4 pc 3/8 Nylonlocknut |

# Tube-Line 500

Short roller & bearing

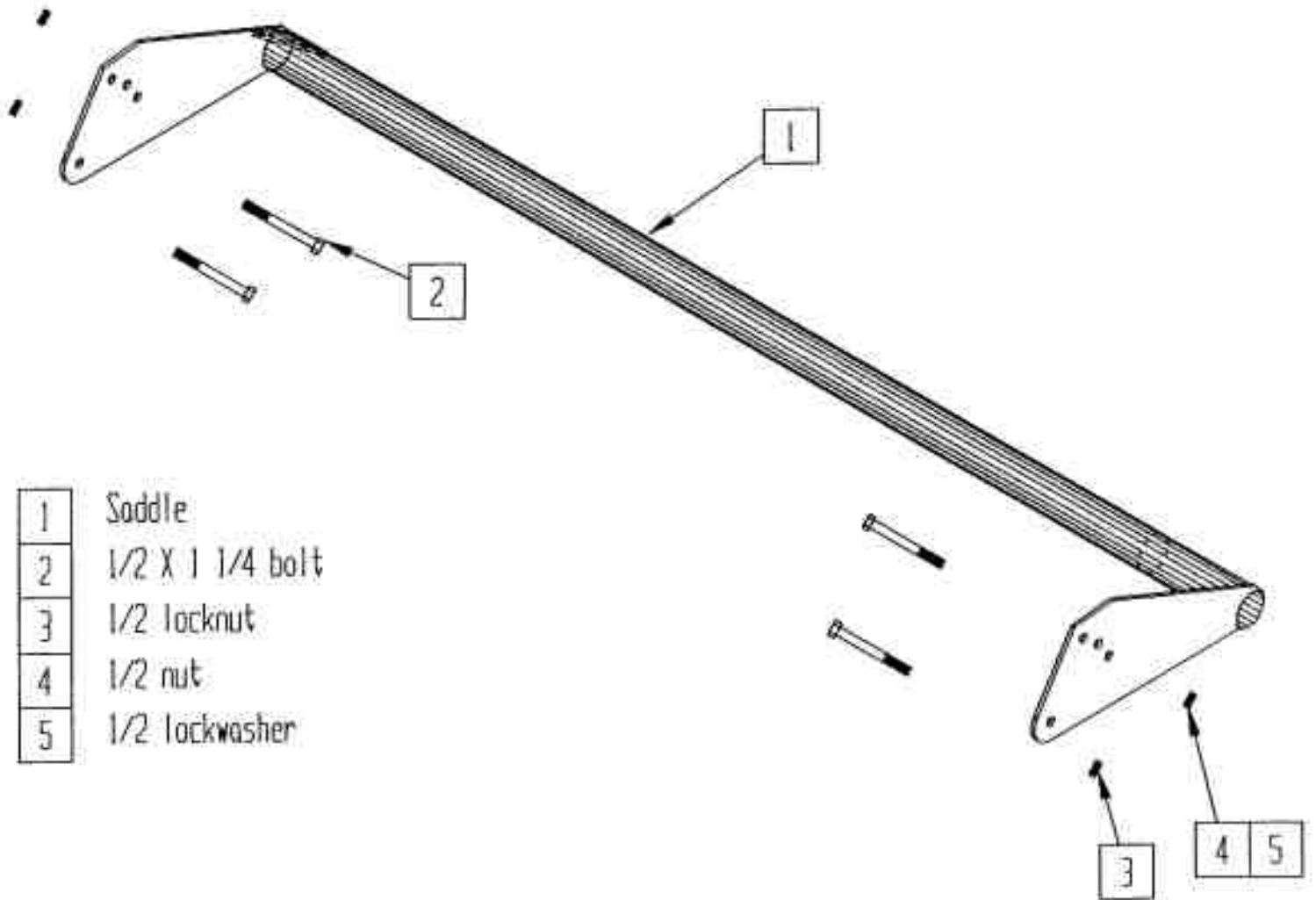


1	Short roller
2	Left bearing bracket
3	Right bearing bracket
4	Bearing
5	3/8 X 1 1/4 bolt
6	3/8 lockwasher
7	3/8 nut
8	1/2 X 4 bolt
9	1/2 lockwasher
10	1/2 nut



# TubeLine 500

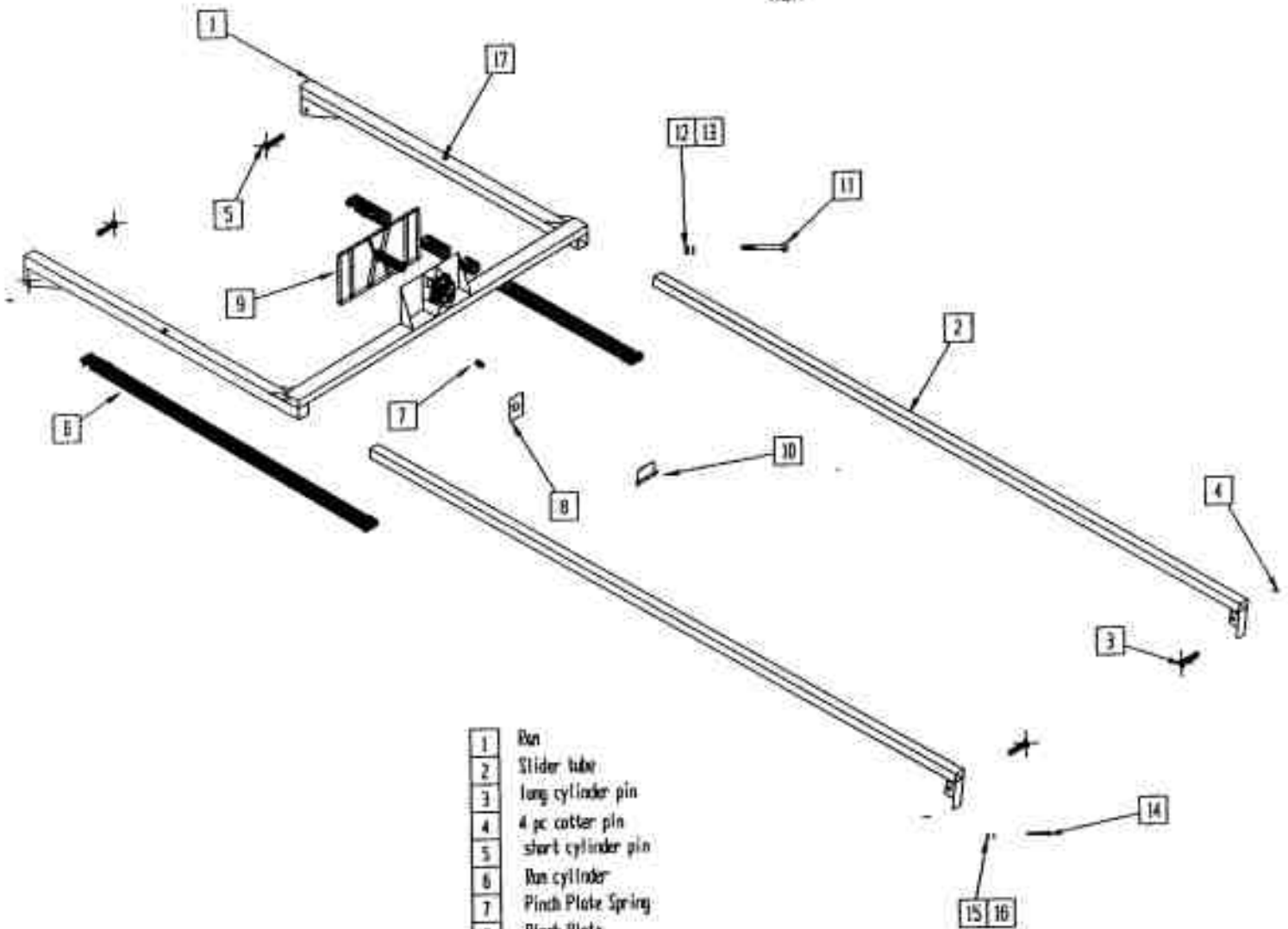
Bale saddle



- |   |                  |
|---|------------------|
| 1 | Saddle           |
| 2 | 1/2 X 1 1/4 bolt |
| 3 | 1/2 locknut      |
| 4 | 1/2 nut          |
| 5 | 1/2 lockwasher   |

# Tube-Line 500

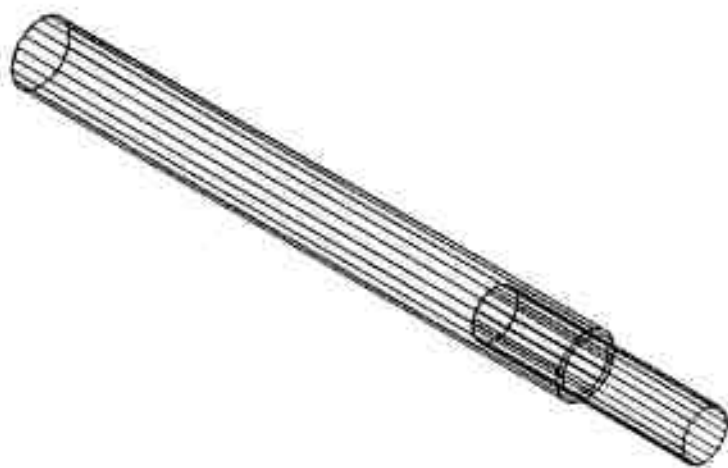
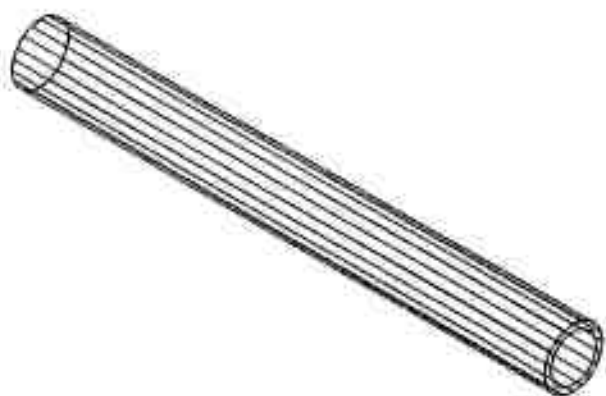
Ran



1	Ran
2	Slider tube
3	long cylinder pin
4	4 pc cotter pin
5	short cylinder pin
6	Ran cylinder
7	Pinch Plate Spring
8	Pinch Plate
9	Push Plate
10	Plate Lock Pin
11	2 pc 1/2 X 4 bolt
12	2 pc 1/2 nut
13	2 pc 1/2 lockwasher
14	4 pc 1/2 X 1 1/2 bolt
15	4 pc 1/2 nut
16	4 pc 1/2 lockwasher
17	2 pc 1/4 - 36 grease fitting

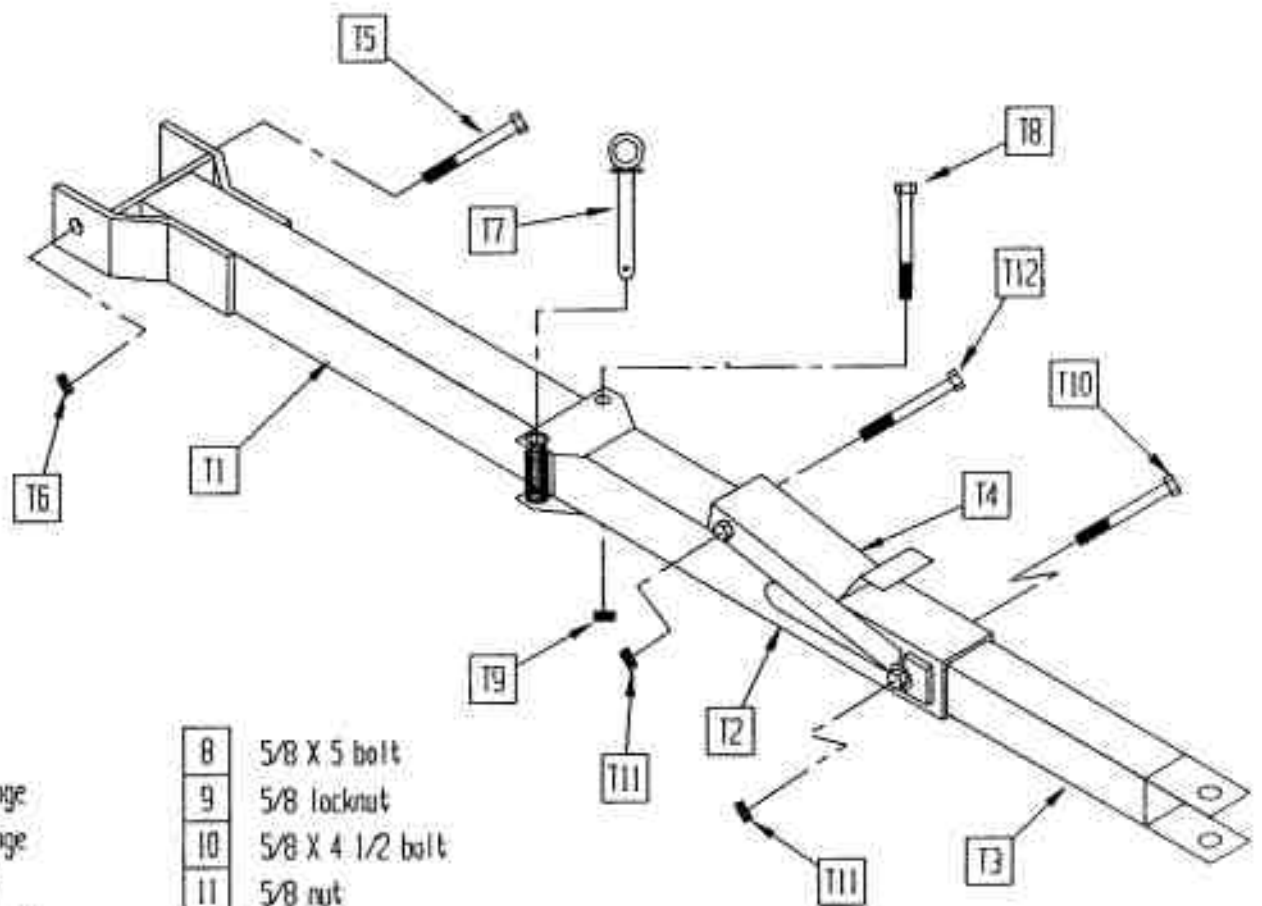
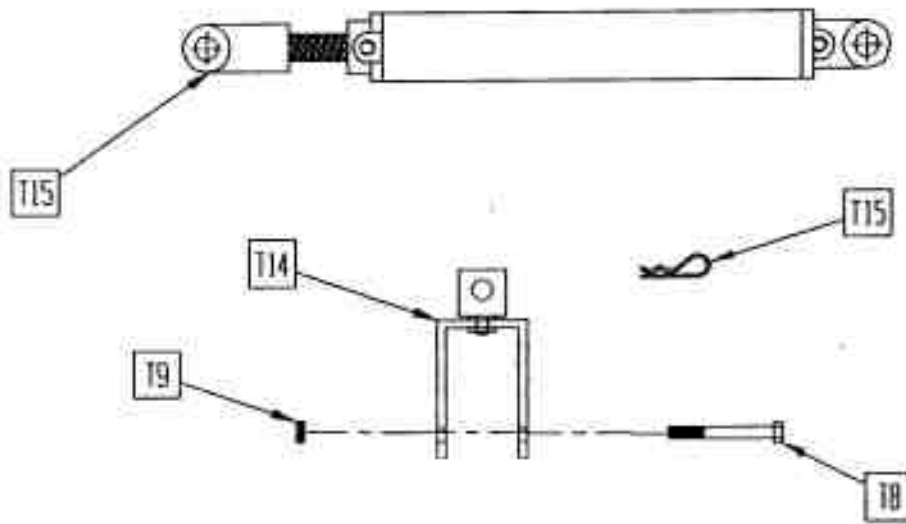
# Tube-Line 500

Push tube



# Tube-Line 500

Tounge

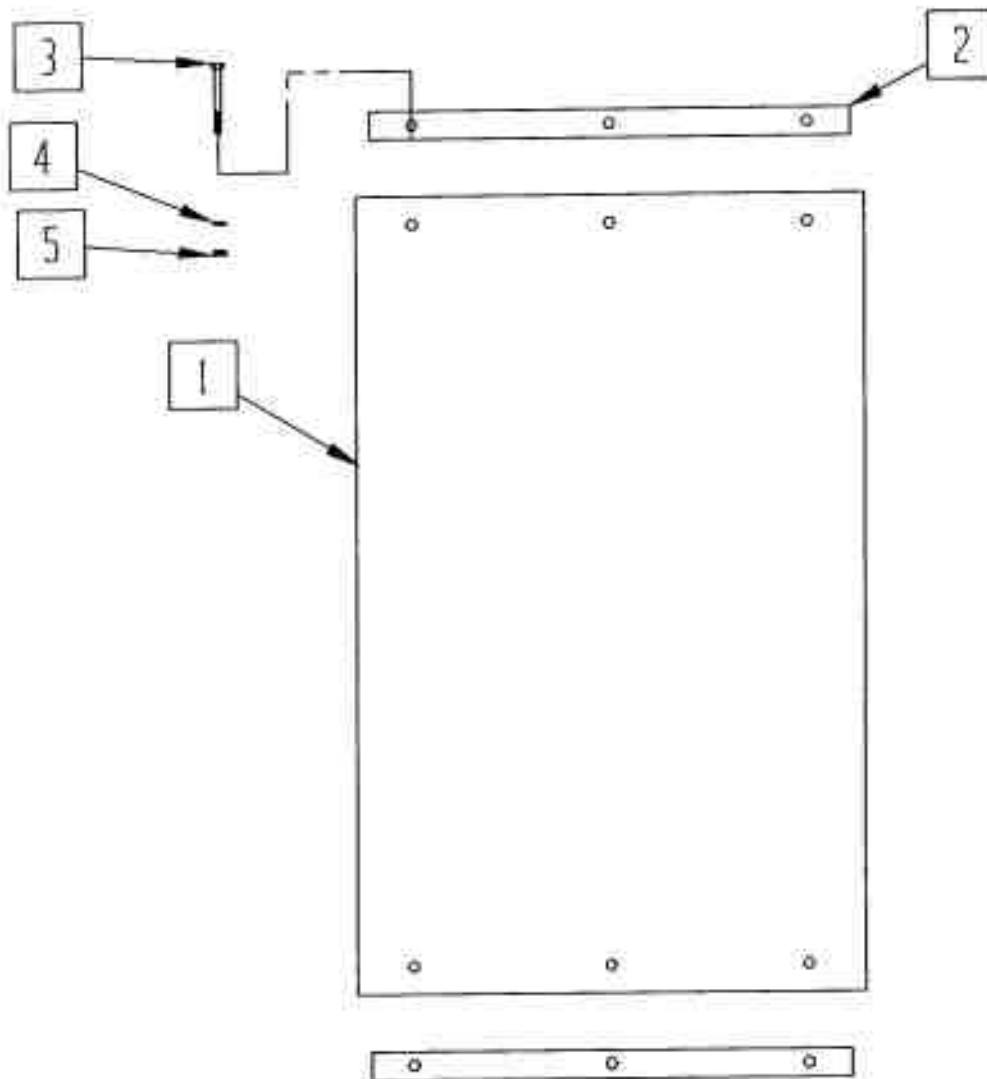


- |   |                  |
|---|------------------|
| 1 | Main tounge      |
| 2 | Swinging tounge  |
| 3 | Sliding tounge   |
| 4 | Tounge latch     |
| 5 | 3/4 X 8 1/2 bolt |
| 6 | 3/4 locknut      |
| 7 | Tounge pin       |

- |    |                               |
|----|-------------------------------|
| 8  | 5/8 X 5 bolt                  |
| 9  | 5/8 locknut                   |
| 10 | 5/8 X 4 1/2 bolt              |
| 11 | 5/8 nut                       |
| 12 | 5/8 X 4 1/2 bolt              |
| 13 | Tounge Holder                 |
| 14 | Hair pin                      |
| 15 | 2 1/2 X 16 Hydraulic Cylinder |

# Tube-Line 500

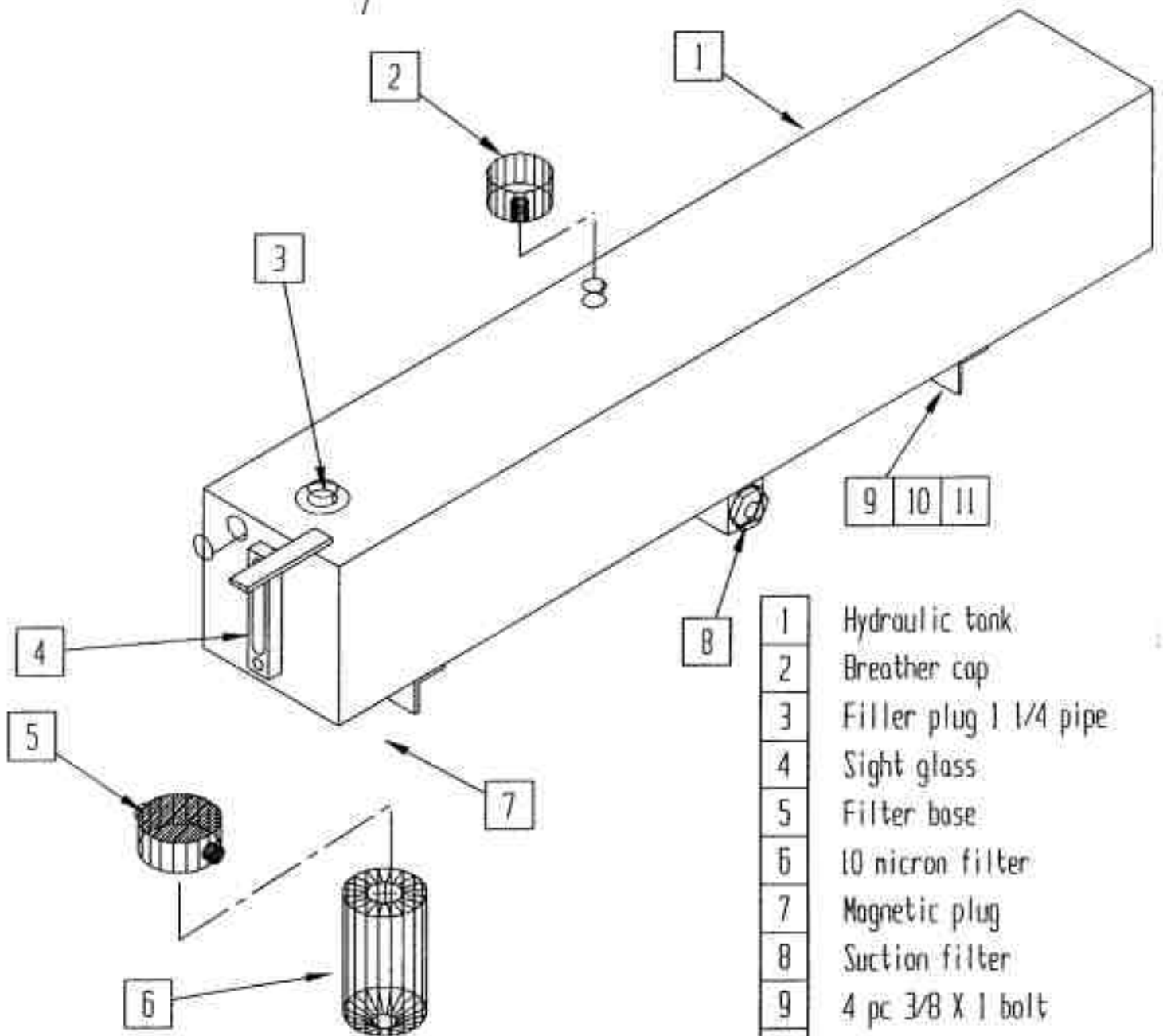
Mud Flap



- |   |             |
|---|-------------|
| 1 | mud flap    |
| 2 | metal strip |
| 3 | bolt        |
| 4 | lockwasher  |
| 5 | nut         |

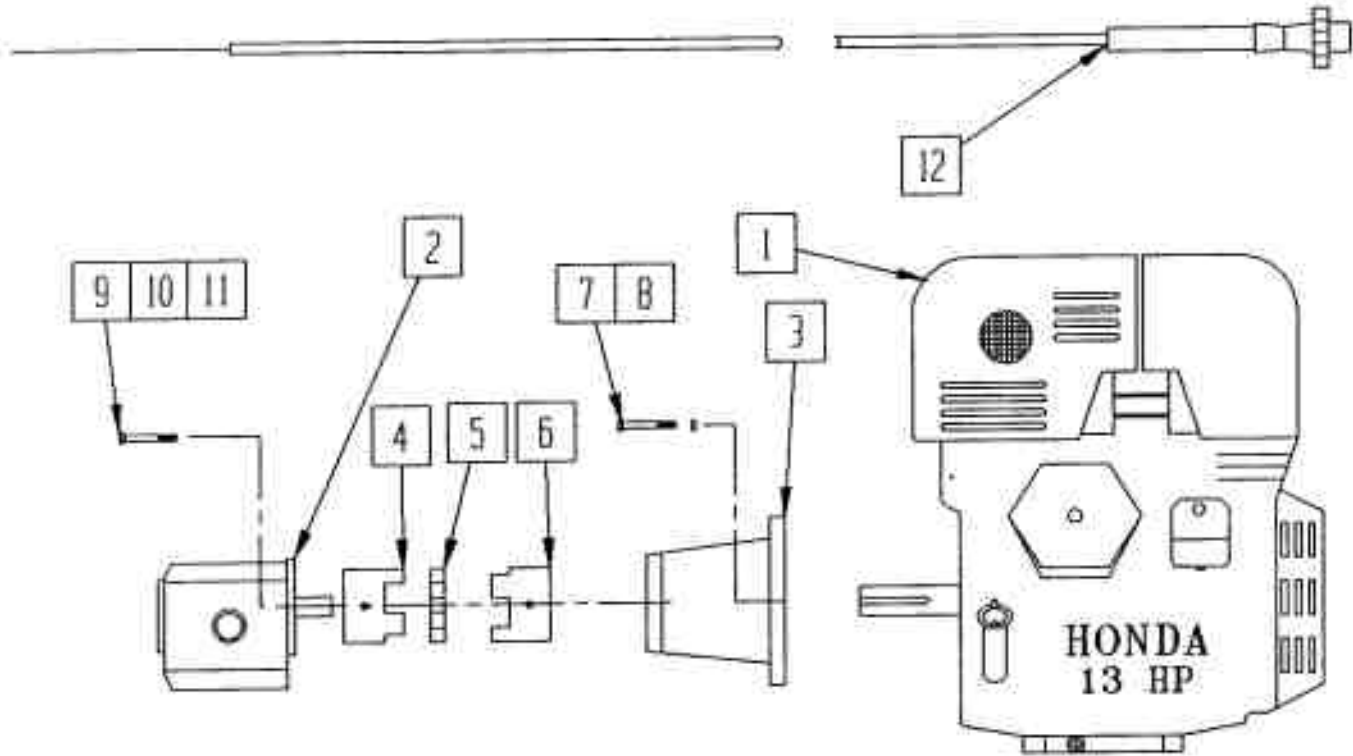
# Tube-Line 500

Hydraulic tank



- |    |                        |
|----|------------------------|
| 1  | Hydraulic tank         |
| 2  | Breather cap           |
| 3  | Filler plug 1 1/4 pipe |
| 4  | Sight glass            |
| 5  | Filter base            |
| 6  | 10 micron filter       |
| 7  | Magnetic plug          |
| 8  | Suction filter         |
| 9  | 4 pc 3/8 X 1 bolt      |
| 10 | 4 pc 3/8 lockwasher    |
| 11 | 4 pc 3/8 nut           |

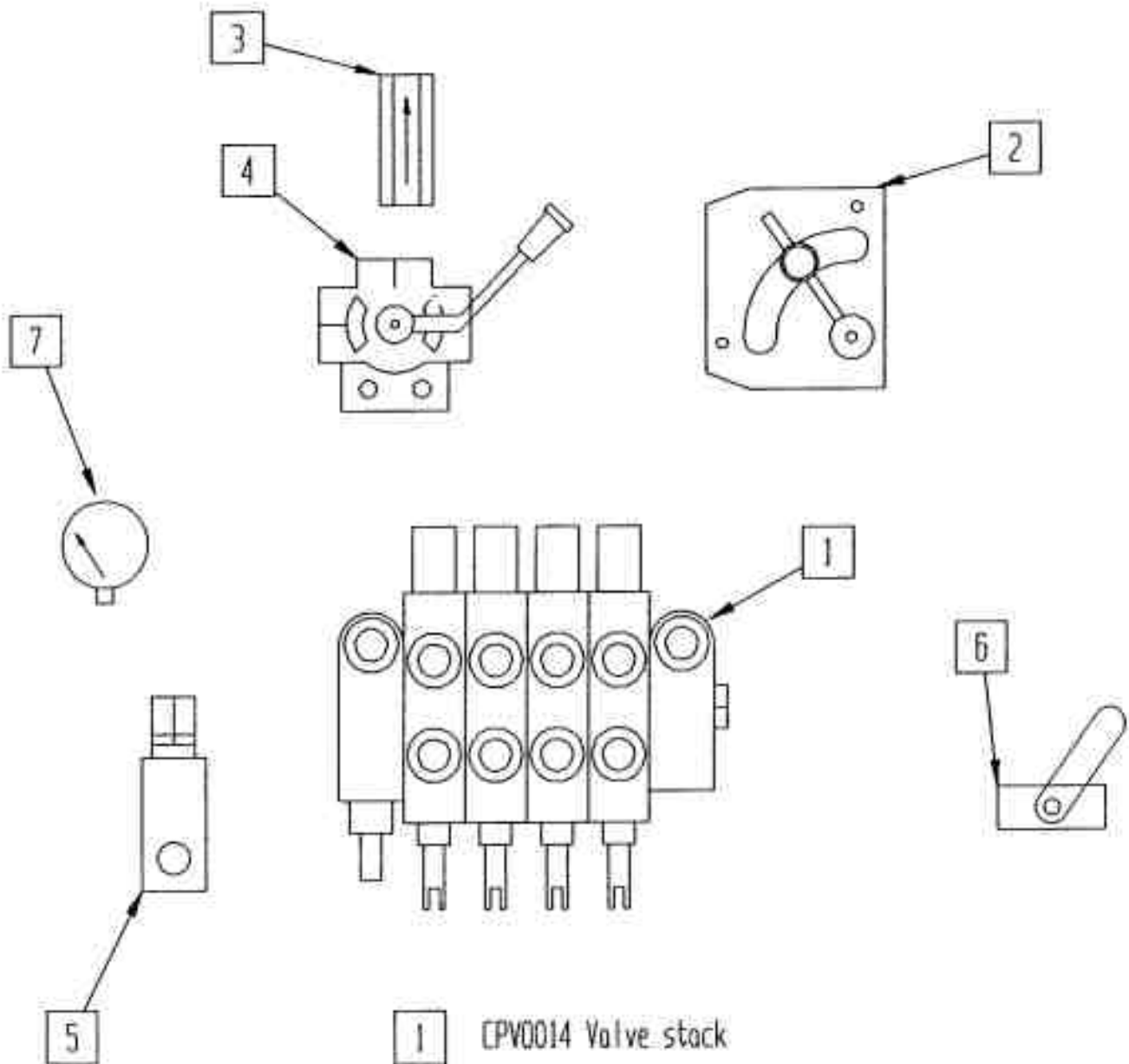
# Tube-Line 500



1	13 Hp HONDA Engine
2	Hydraulic Pump
3	Engine to pump adaptor
4	Love Joy Coupling
5	Coupling spacer
6	Love Joy Coupling engine

7	4 pc 3/8 X 1 bolt
8	4 pc 3/8 lockwasher
9	2 pc 3/8 1 1/4 bolt
10	2 pc 3/8 lockwasher
11	2 pc 3/8 flatwasher
12	Throttle Cable (manual)

Tube-Line 500  
Manual valve bank

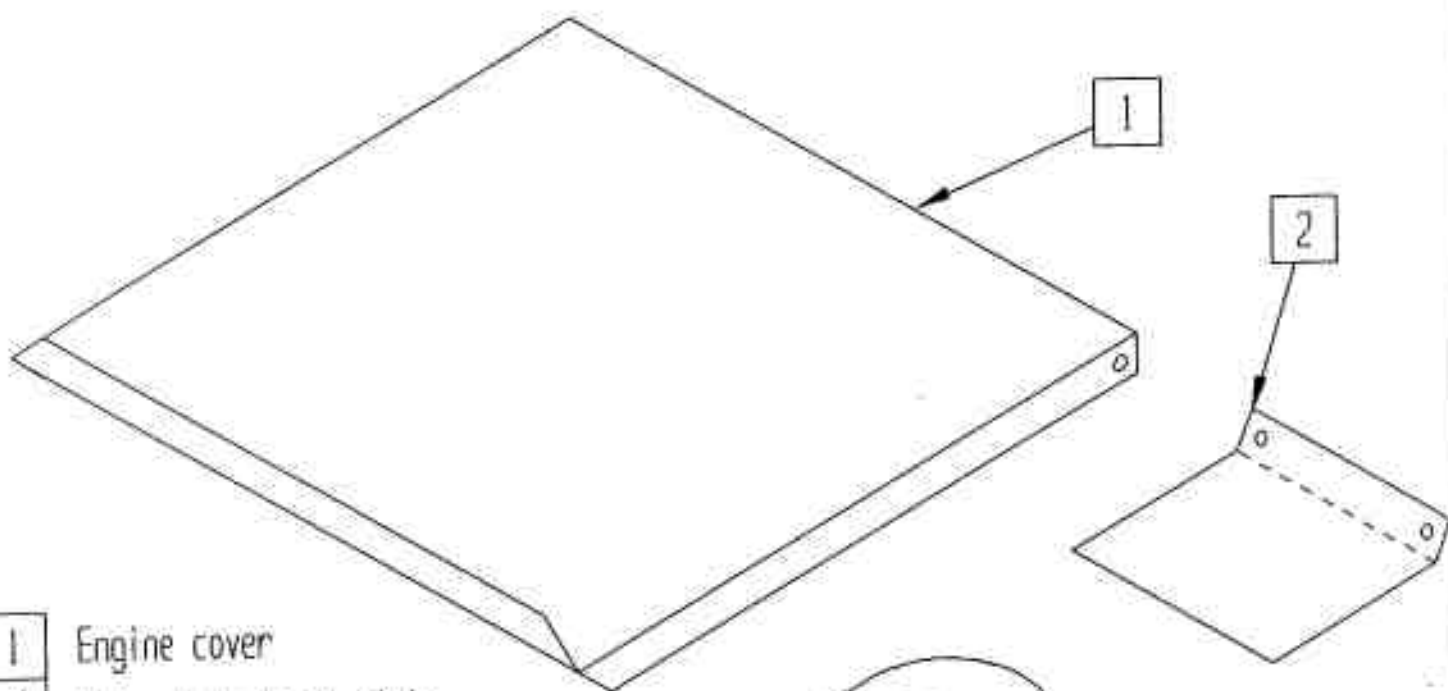


- |   |                            |
|---|----------------------------|
| 1 | CPV0014 Valve stack        |
| 2 | RD - 150 - 08 Flow control |
| 3 | 1/2 Check valve            |
| 4 | Selector Valve             |
| 5 | Relief Valve               |
| 6 | Ball Valve                 |
| 7 | Pressure Gauge             |



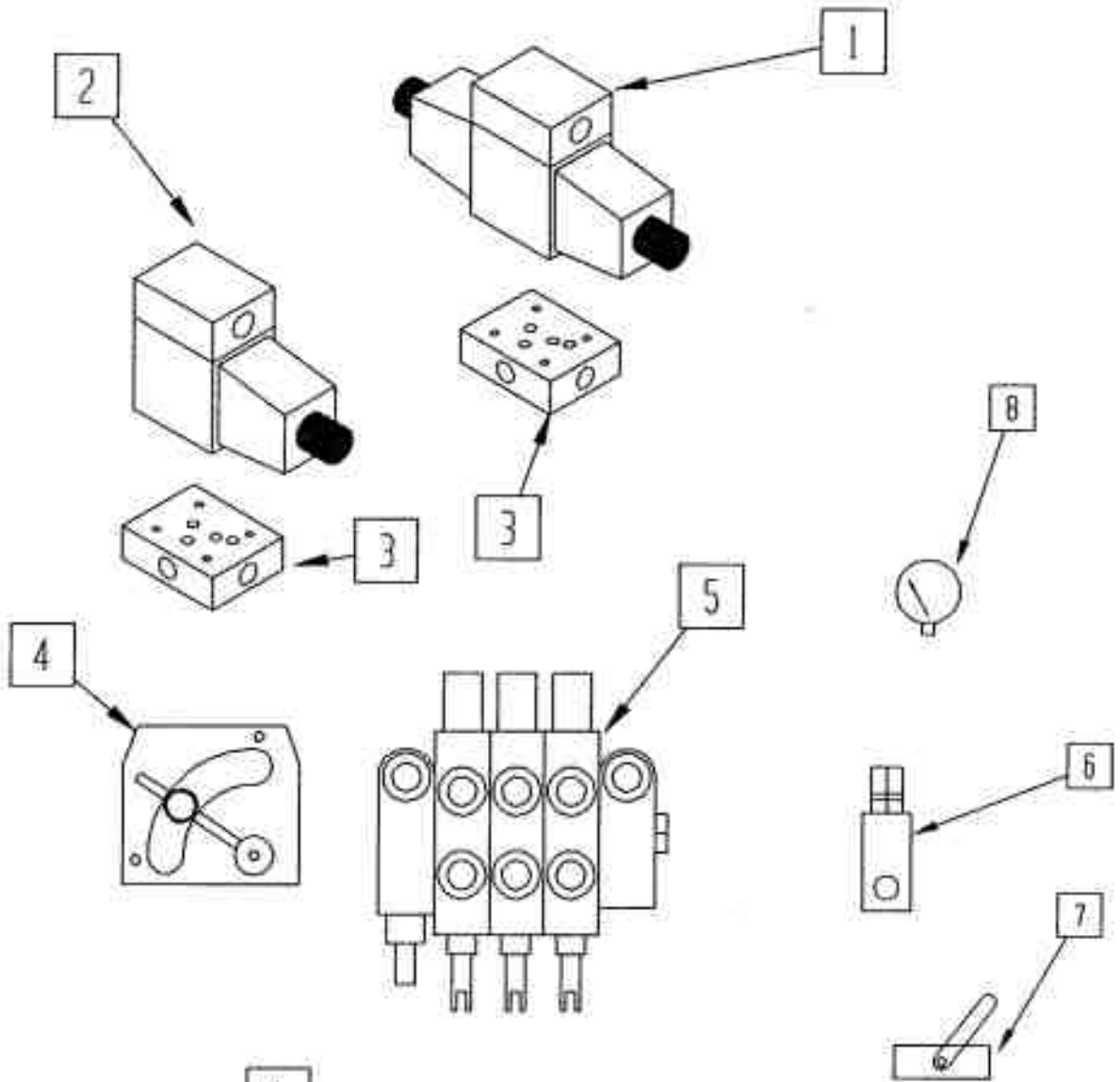
# Tube-Line 500

Engine cover & decal plate



- |   |                                    |
|---|------------------------------------|
| 1 | Engine cover                       |
| 2 | Valve bank decal plate             |
| 3 | Selector valve decal plate         |
| 4 | Selector valve decal plate bracket |

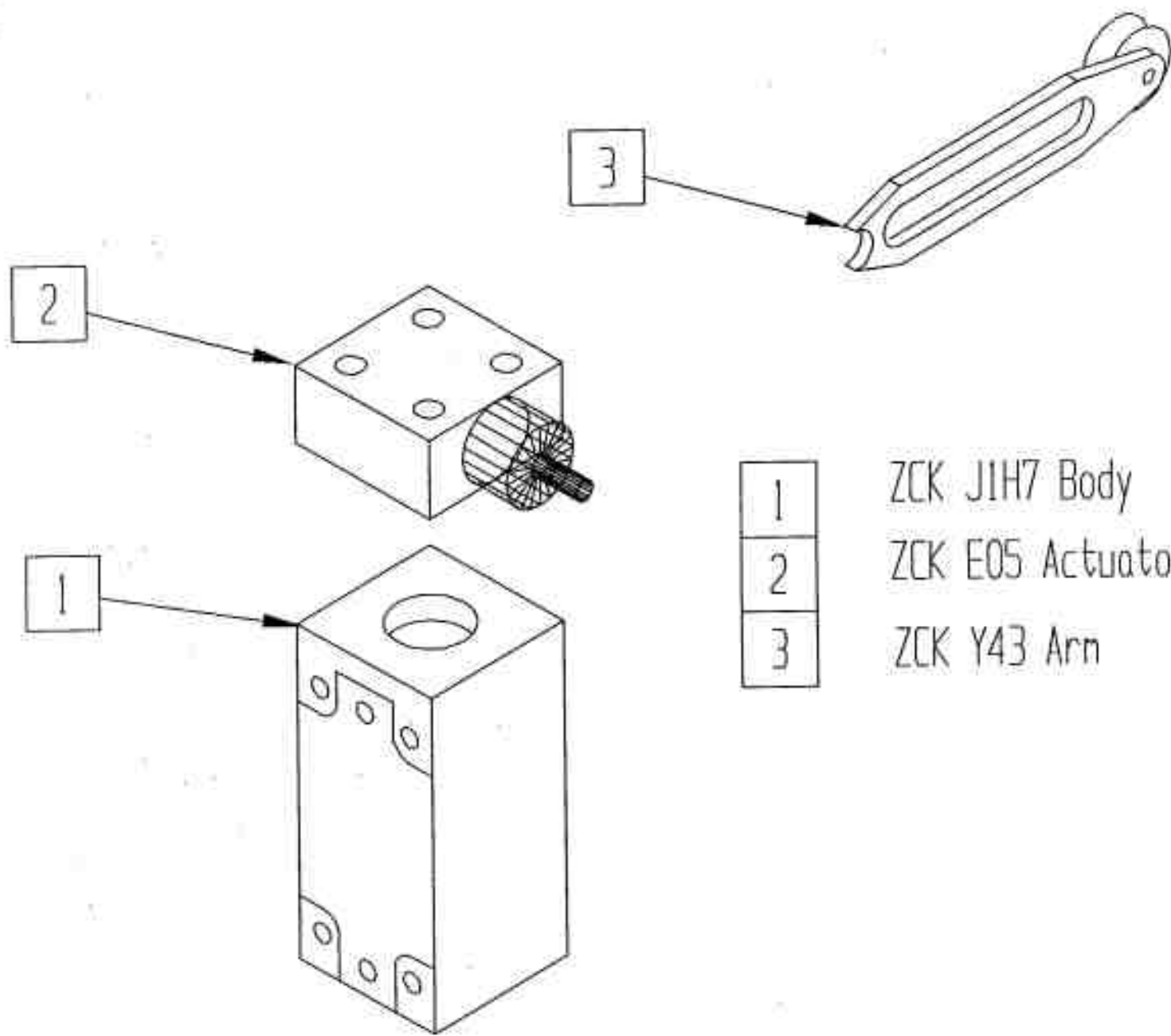
# Tube-Line 500 Electric Solenoid Valve



- |   |                                   |
|---|-----------------------------------|
| 1 | YS12M3LGB75L tandem center 12 vdc |
| 2 | YS12M1AGB75L single sol 12 vdc    |
| 3 | AD053P5285 subplate SAE ported    |
| 4 | RD - 150 - 08 Flow control        |
| 5 | CPY0013 Valve stack               |
| 6 | Relief Valve                      |
| 7 | Ball Valve                        |
| 8 | Pressure Gauge                    |

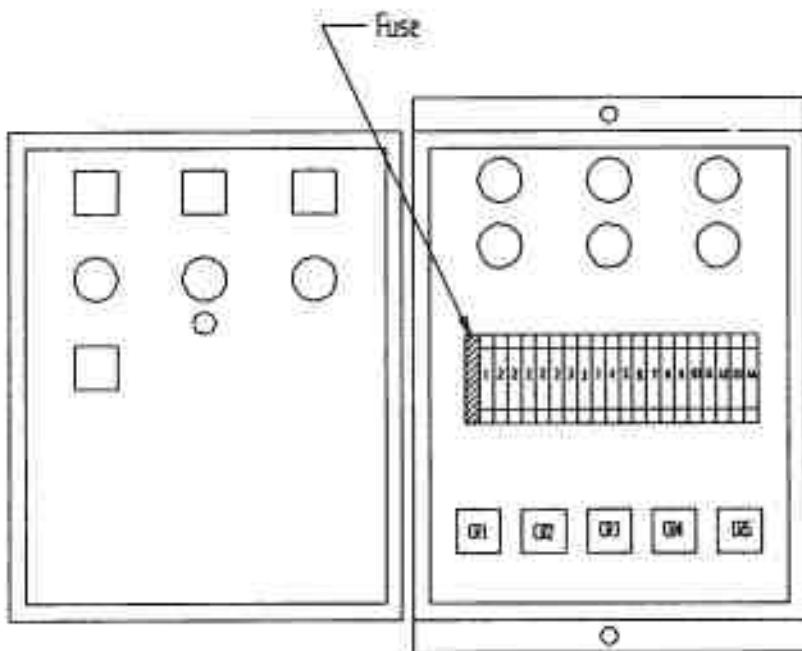
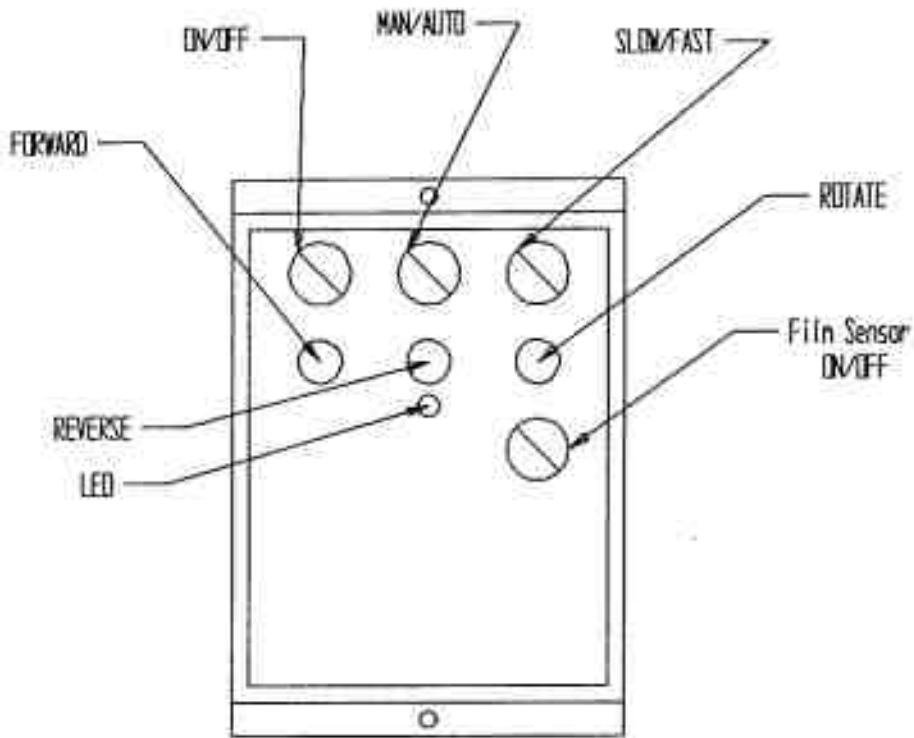
# Tube-Line 500

Telemecanique Limit Switch



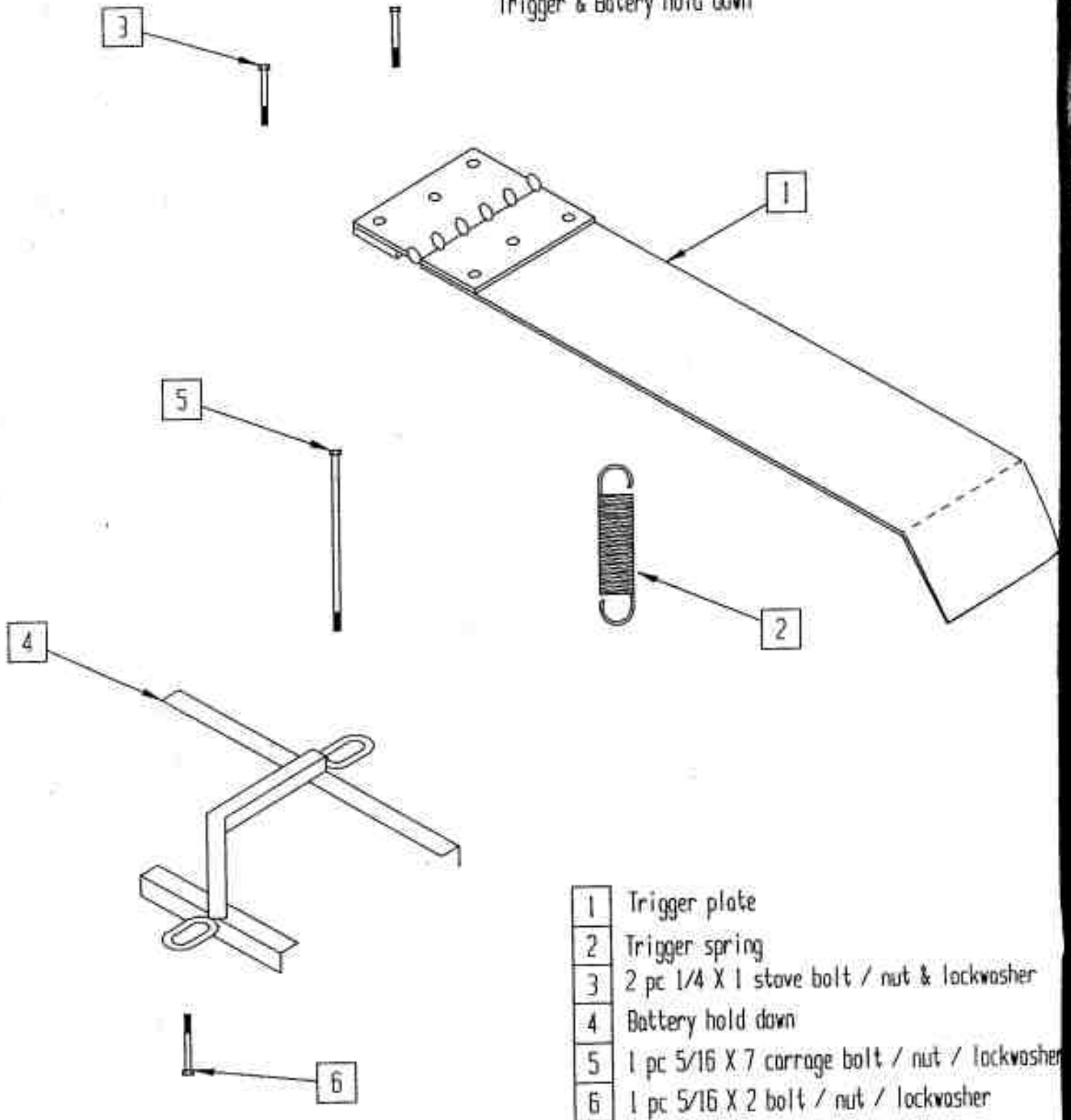
- |   |                  |
|---|------------------|
| 1 | ZCK J1H7 Body    |
| 2 | ZCK E05 Actuator |
| 3 | ZCK Y43 Arm      |

# Tube-Line 500 Control Panel



# Tube-Line 500

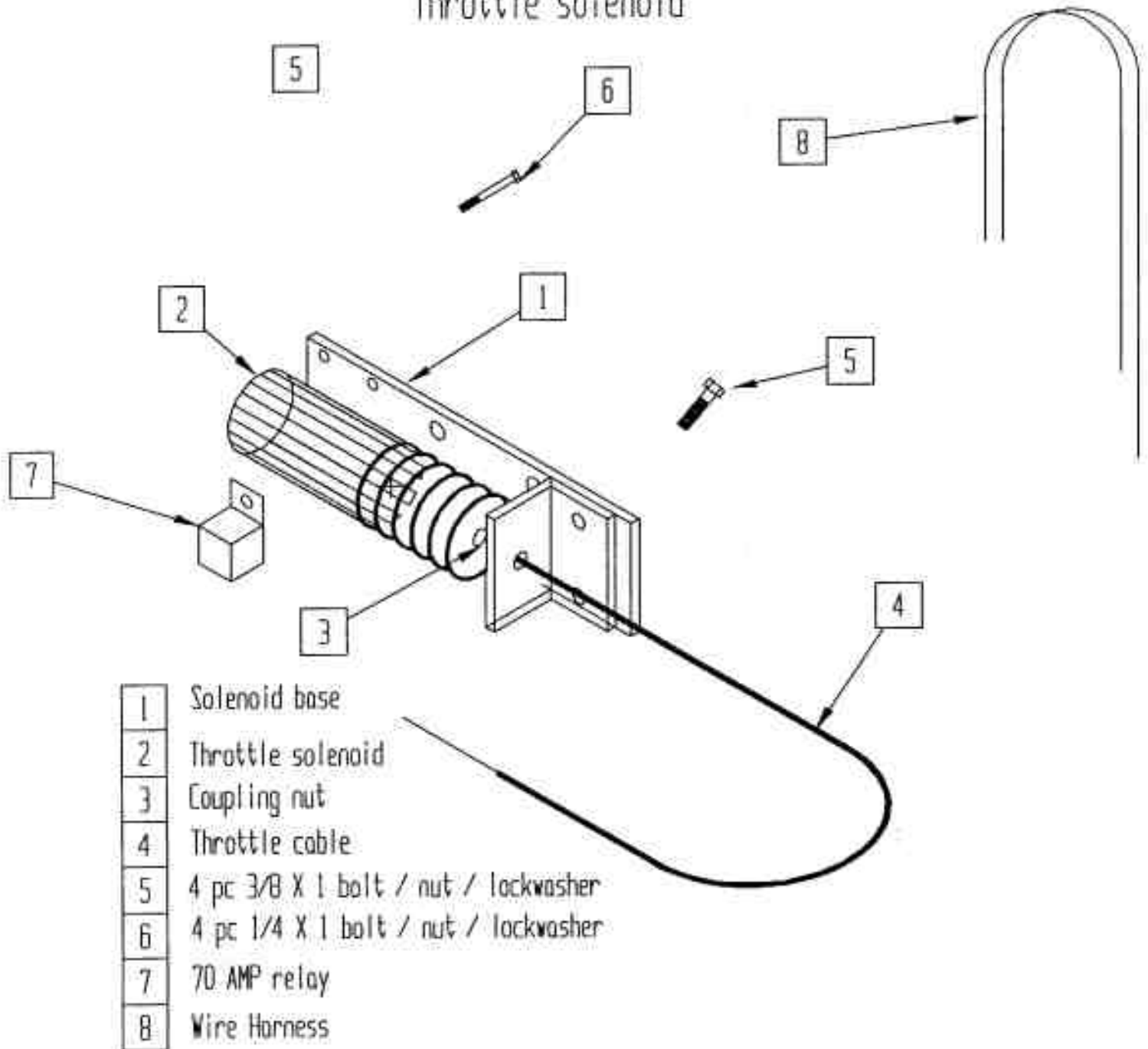
Trigger & Botery hold down



- |   |  |
|---|--|
| 1 | Trigger plate                                  |
| 2 | Trigger spring                                 |
| 3 | 2 pc 1/4 X 1 stove bolt / nut & lockwasher     |
| 4 | Battery hold down                              |
| 5 | 1 pc 5/16 X 7 carriage bolt / nut / lockwasher |
| 6 | 1 pc 5/16 X 2 bolt / nut / lockwasher          |

# Tube-Line 500

Throttle solenoid



## Tube-Line500

### Manual Hydraulic Sequence of operation

- 1 With valves in neutral position engine running hydraulic fluid is pumped through valve stack and returned to reservoir.
- 2 Brakes, tail, steering are standard hydraulic cylinder operation.
- 3 Wrap cycle - push wrap valve in, detent will hold valve in position, fluid flows from valve through flow control and is split into 2 circuits, one circuit will go to ram cylinders and the other circuit will go to the hydraulic motor. These circuits are proportioned with the lever on flow control valve. With the selector valve handle in " Both " position flow will go to cylinder and motor. By changing flow control handle, cylinders will speed up or slow down accordingly. At the same time motor will change speed inversely to cylinder ie. when cylinder slows down motor will speed up.
- 4 Selector valve is used to bleed either cylinder or motor flow back to tank or block both circuits causing both cylinder and motor to operate. ie. With handle in wrap only position the fluid that would normally go to the cylinder will flow to tank. With handle in ram only position motor fluid will go to the tank.
- 5 Wrap cycle - pull wrap valve out, detent will hold valve in position, fluid will flow from valve port to cylinder causing cylinder to retract. Fluid from the other end of cylinder will return through the check- valve, at flow control back through valve stack and to tank.
- 6 Check valve at motor lets motor freewheel in one direction without cavitating. Relief valve at motor return acts as restrictor valve to keep motor from turning when ram cylinder is retracting

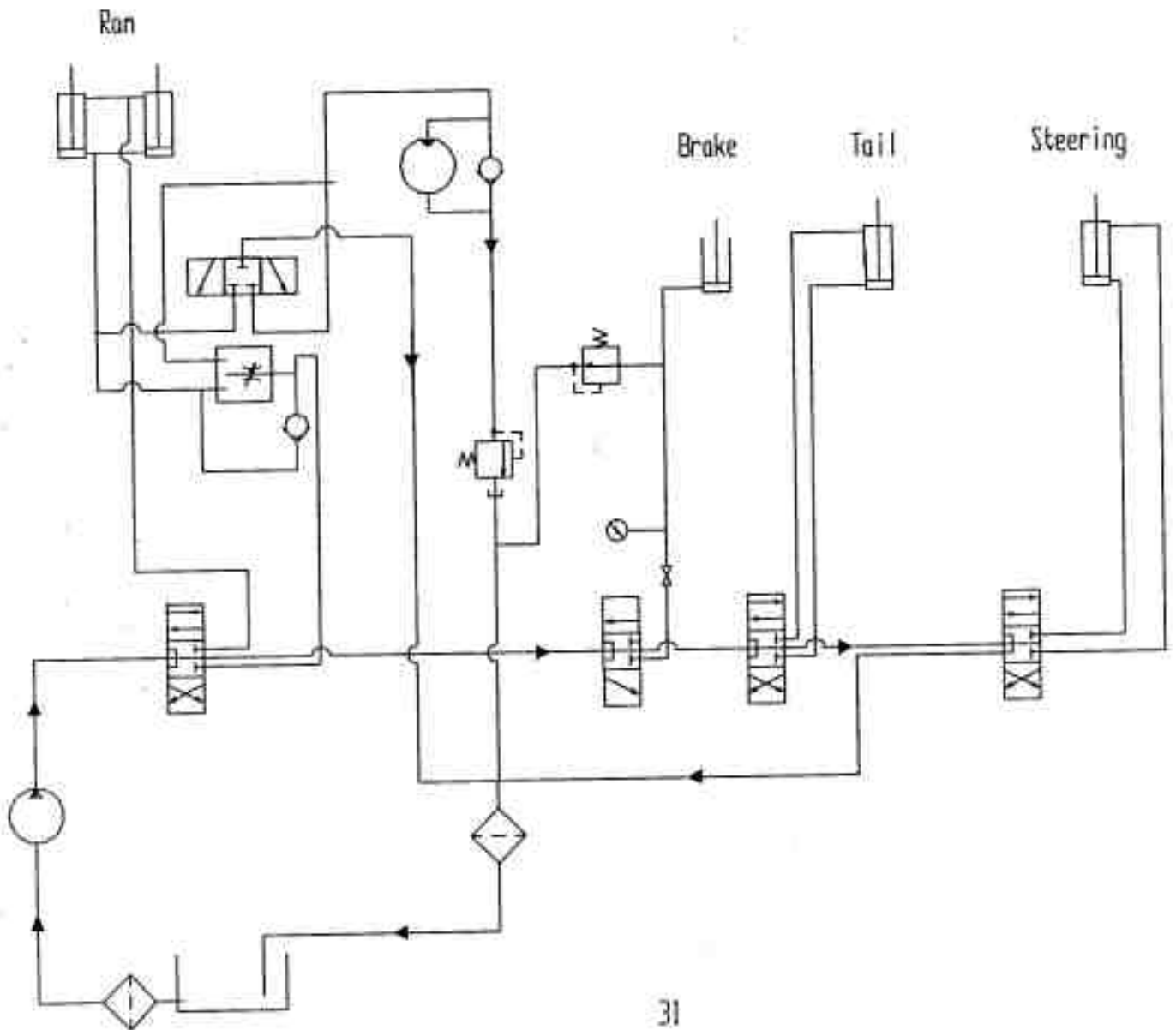
**Tube-Line 500**  
Electric Hydraulic  
Sequence of operation

- 1 With valves in neutral position , control panel on/off switch in off position, engine running fluid is pumped through valve stack and returned to reservoir.
  
- 2 Brakes,tail,steering, are standard hydraulic cylinder operation.
  
- 3 Wrap cycle fluid flows from power beyond port on valve stack to flow control,and is split into 2 circuits one circuit goes to double solenoid valve for ram cylinder, the other circuit goes to single solenoid valve for hydraulic motor. By moving flow control handle more or less fluid will flow to cylinder or motor ie. as more fluid flows to cylinder less fluid will flow to motor and vise-versa.
  
- 4 Electric control panel - With "Fast-Slow" switch turned to Slow with "Man-Auto" switch turned to Man turn "On-Off" switch to On, then red LED will light up indicating 12V power is at control circuits, with engine running turn "Fast-Slow switch to Fast and the engine will speed up to max. RPM approx 3500-RPM. Push Forward button in to energize solenoid A on double solenoid valve . Ram cylinder will extend. Push Reverse button to energize solenoid B on same valve. Ram cylinder will retract. Push Rotate button in and hydraulic motor will turn. Push-buttons have to be held in to operate, by releasing them action will stop.
  
- 5 When "Man-Auto" switch is turned to Auto, engine throttle "Fast-Slow" switch now no longer functions, including push-buttons switches. Depress trigger switch located on bale table, and the engine thottle and hydraulic valve are energised. The engine will speed up and the ram cylinder will extend until the bale on the table starts to move the bale in wrap chamber. This will cause the roller with sprocket to turn, tripping the limit switch thereby energizing the single solenoid valve and turning the wrap motor. When ram is extended to limit switch at end of stroke, single solenoid valve and double solenoid valve A will turn off. Solenoid B will energize causing ram cylinder to retract until it trips limit switch at the front end of bale table, solenoid B and throttle solenoid will turn off, the ram cylinder will stop and engine will idle down.



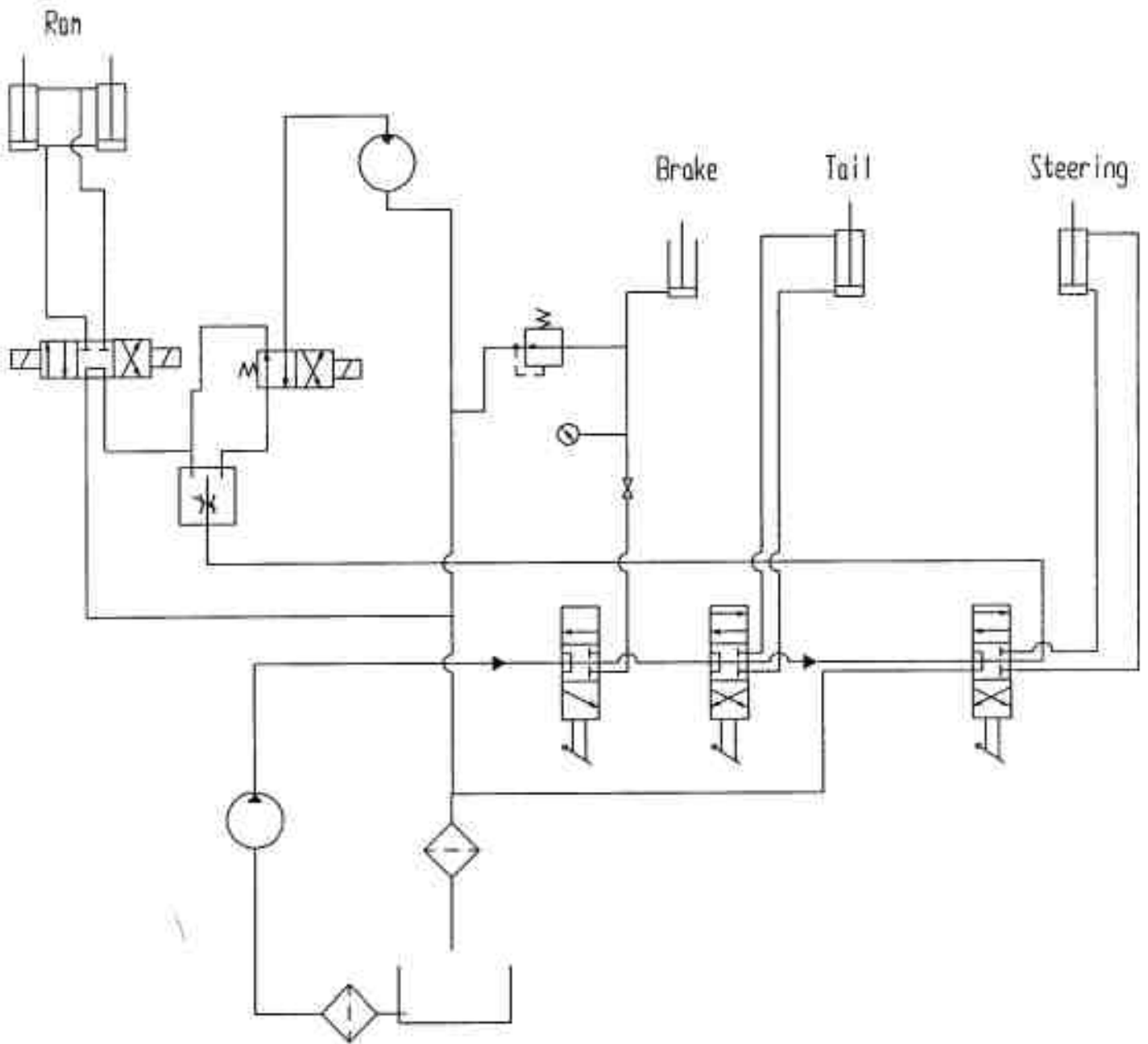
# Tube-Line 500

Manual Hydraulic Schematic



# Tube-Line 500

Electric Hydraulic Schematic



# TubeLine 500

## Electric Automatic

