

1998

Tube-Line 5500

Parts and Service
Manual and Automatic

Notes

Electric Solenoid valves can be manually operated by pushing a small punch into end of spool and holding it in .

CAUTION STAY AWAY FROM WRAP HOOP WHEN ENGINE IS RUNNING.

Inside Control Panel, control relays are numbered CR1 to CR6 from left to right, relay CR1 is wired to table trigger . CR1 will activate solenoid valve to extend ram cylinder . CR2 and CR3 are wired to motion sensor switch at rear roller, when switch arm is between teeth on sprocket, CR3 is energized, as roller turns switch arm it will be pushed to top of tooth on sprocket energizing CR2 and vice-versa . After both relays CR2 and CR3 are activated, wrap solenoid is energized causing wrap motor to turn . When ram cylinder is extended to the limit switch at the engine CR1,CR2 and CR3 will turn off and CR4 turns on. Wrap motor will stop and ram cylinder will retract until ram cylinder trips limit switch at front end of table . All control relays will turn off .

Testing can be done by pushing trigger plate then going to the back and turning roller with sprocket, then waiting until machine goes through the cycle . Or, you can push the small square button on end of control relay 1, then push button on control relay 2 or 3, whichever is not activated. Then waiting until machine goes through the cycle .

When running machine through the cycle and wrapper motor or the cylinders do not work, check flow control valve to see if flow is going to both motor and cylinder

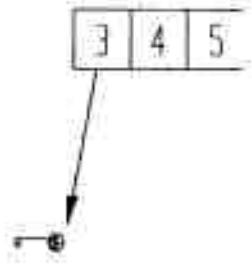
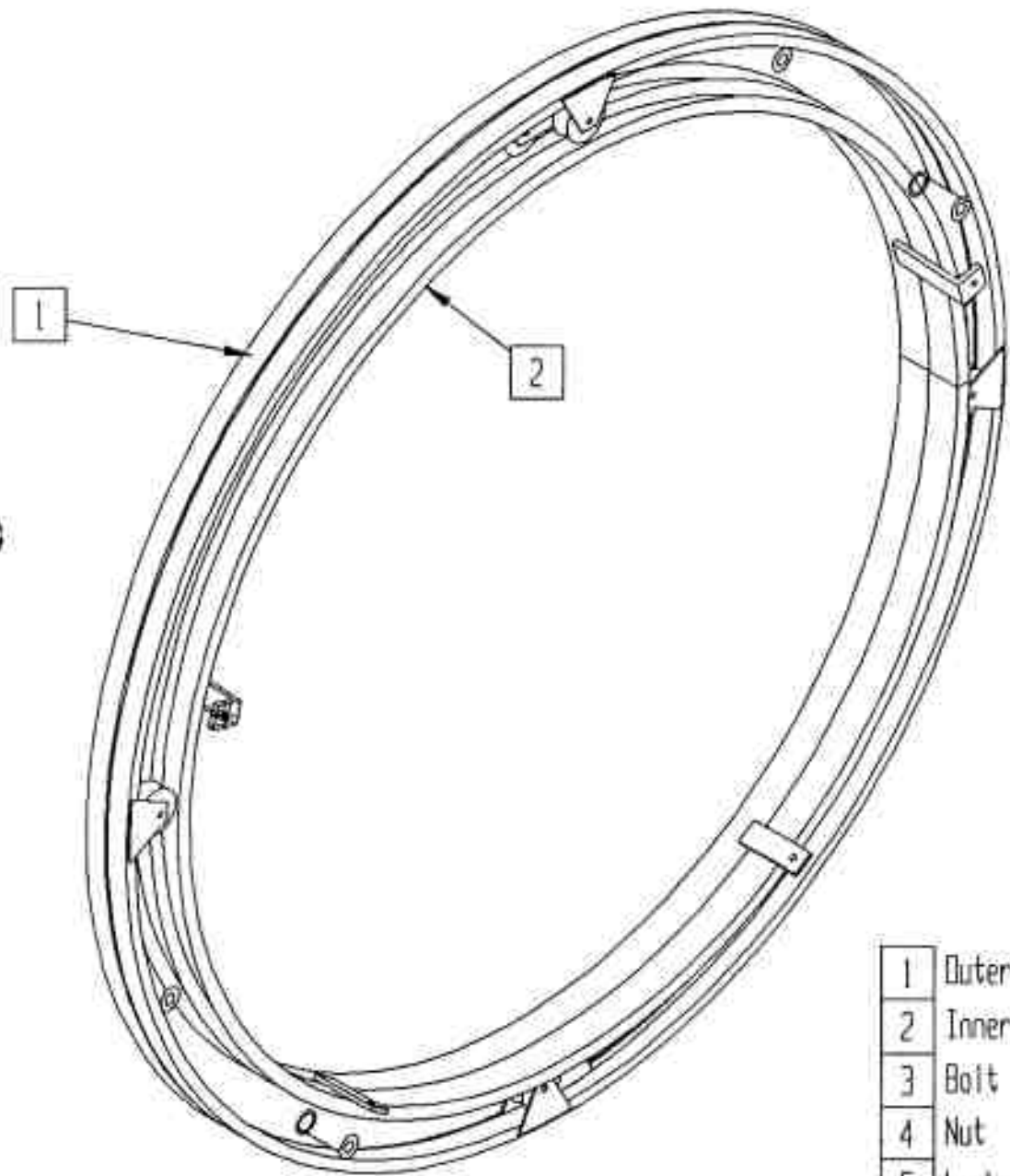
Engine is stopped by grounding ignition, in case of ignition failure make sure that stop switch wire is not shorting to frame and engine switch is not in closed position.

Steering is controlled by switch right/left on control panel through CR5 and CR6, activating coil A or B on steering solenoid valve.

Tube-Line 550
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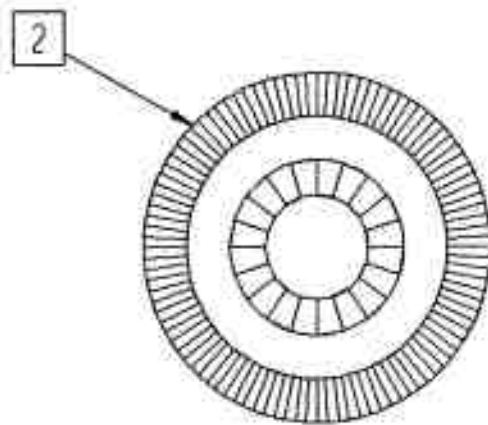
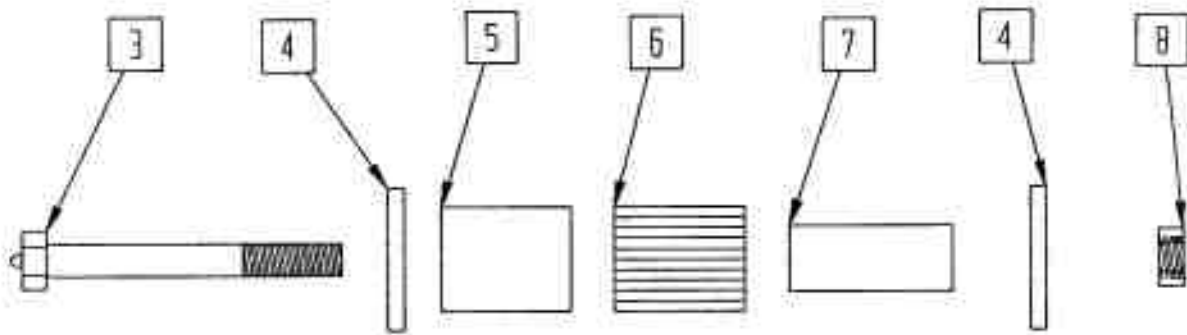
Tube-Line 550
Hoop



- | | |
|---|------------|
| 1 | Outer Ring |
| 2 | Inner Ring |
| 3 | Bolt |
| 4 | Nut |
| 5 | Lockwasher |

Tube-Line 550

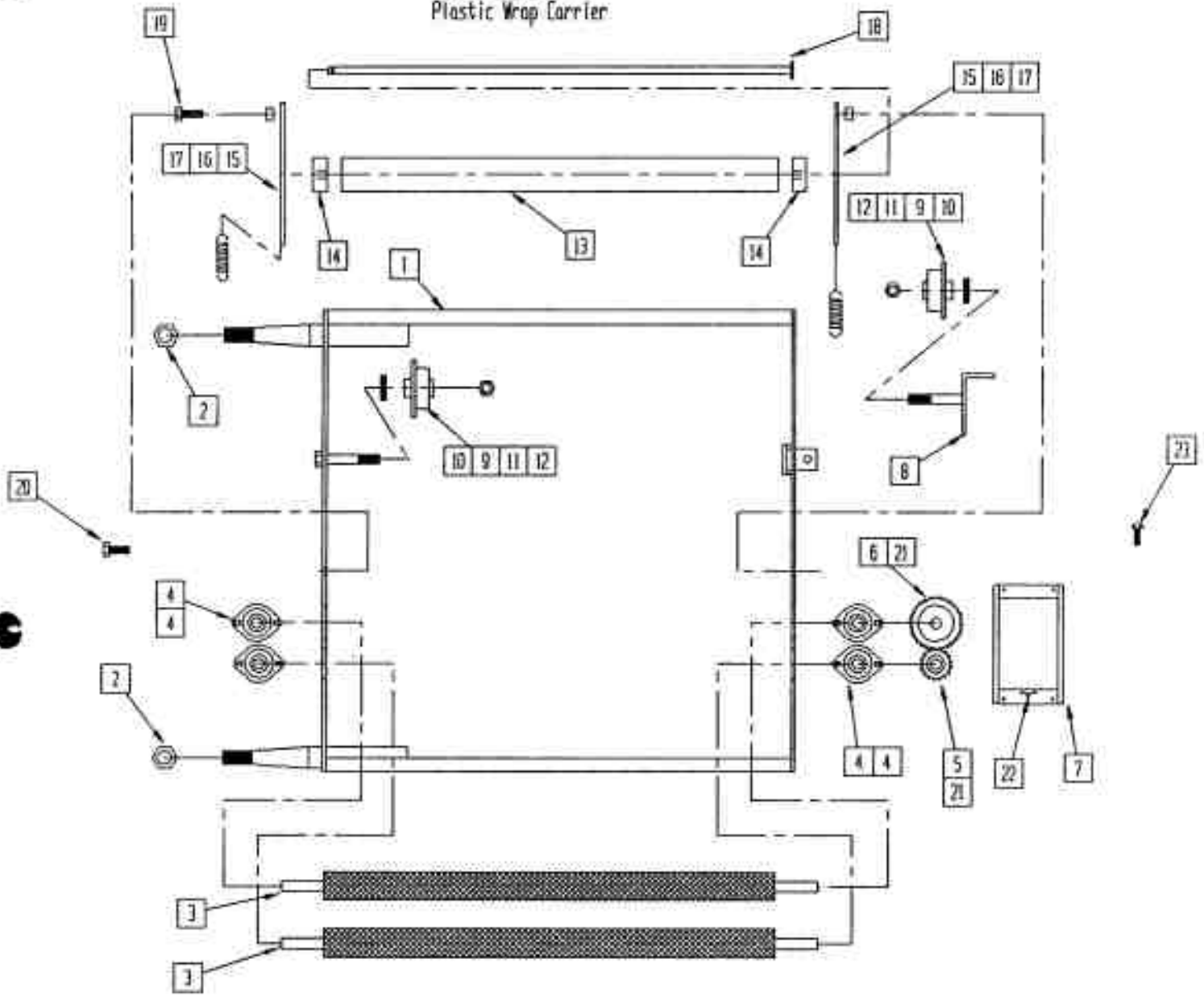
Hoop wheels



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

C

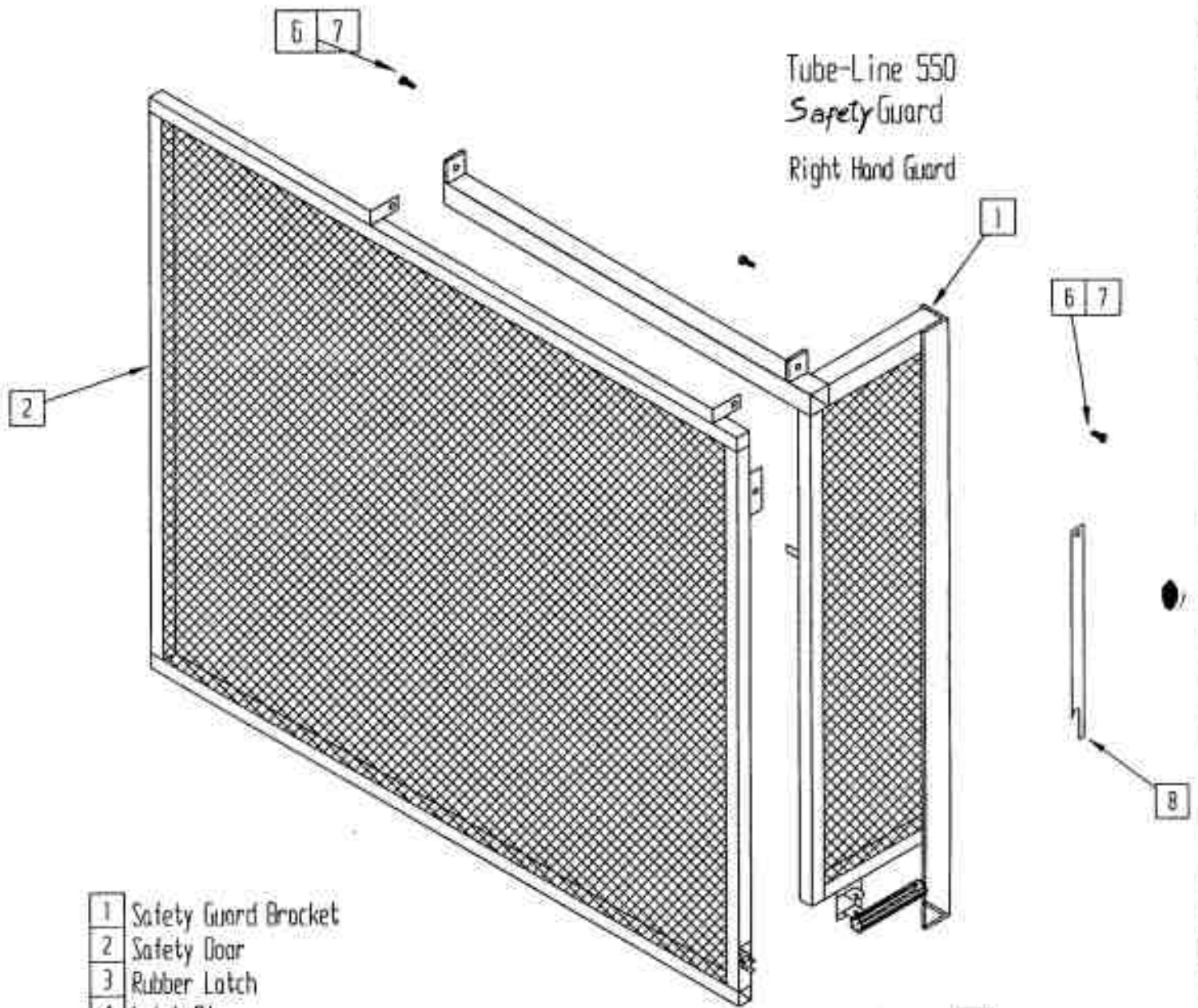
Tube - Line 550
Plastic Wrap Carrier



C

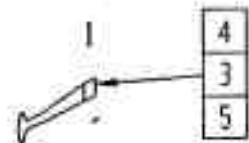
- 1 Main Wrap Bracket
- 2 1-14 UNC Nut
- 3 Tensioner Roller
- 4 3/4 Bearing
- 5 Small Gear
- 6 Large Gear
- 7 Gear Cover
- 8 Spool Holder
- 9 Plastic Wrap Spool
- 10 5/8 Flat washer
- 11 5/8 Nylocknut
- 12 Oilite Bearing

- 13 ABS Pipe
- 14 IMPC Bearing
- 15 ABS Bracket
- 16 Spacer
- 17 Spring
- 18 ABS Axle
- 19 1/2 x 2 Bolt
- 20 5/16 Carriage Bolt
- 21 3/16 Keystock
- 22 Grease Fitting
- 23 10-24 x 3/4 Machine Bolt



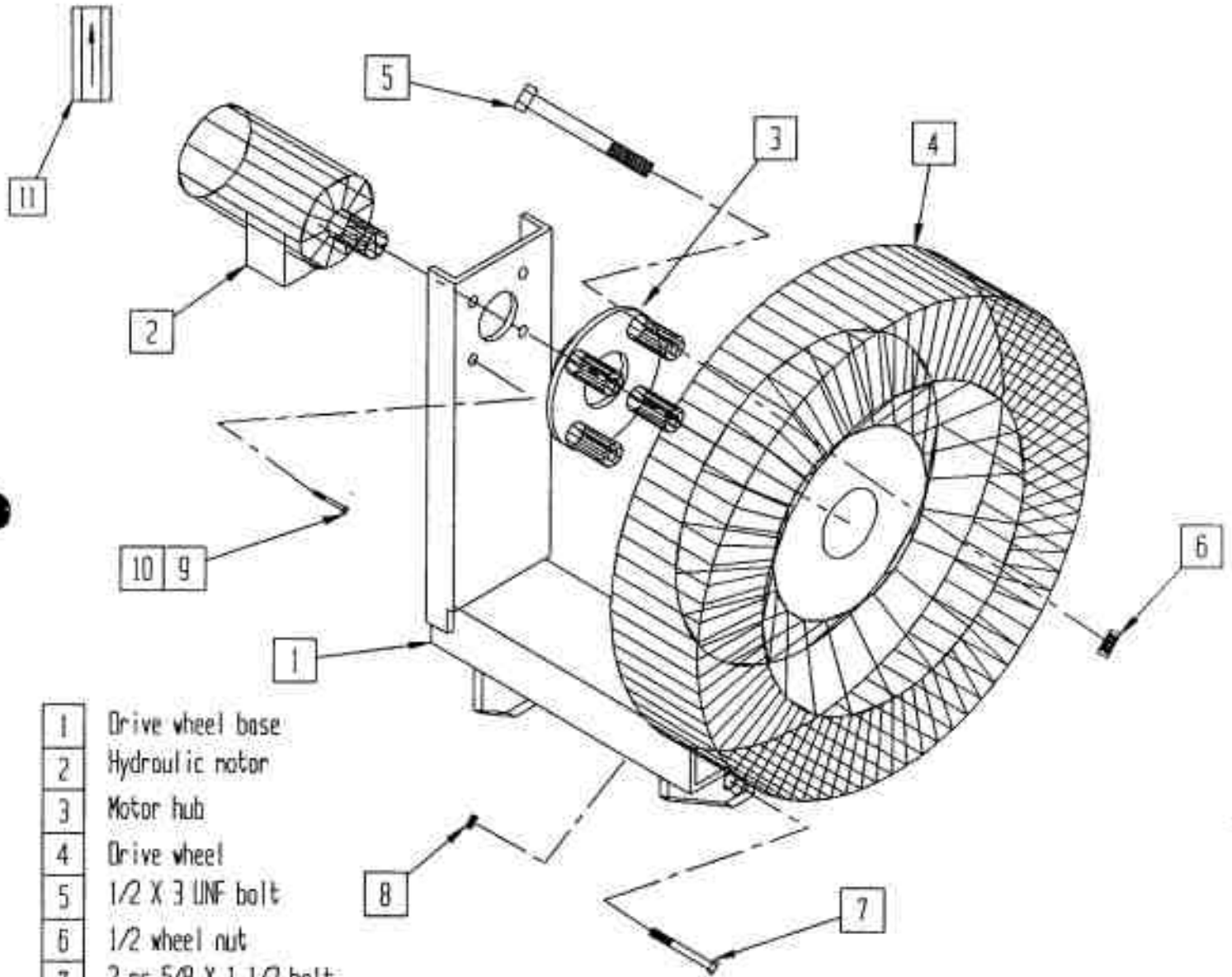
Tube-Line 550
 Safety Guard
 Right Hand Guard

- | | |
|---|------------------------|
| 1 | Safety Guard Bracket |
| 2 | Safety Door |
| 3 | Rubber Latch |
| 4 | Latch Pin |
| 5 | Cotter Pin |
| 6 | 3/8 x 1 1/4 Hinge Bolt |
| 7 | 3/8 Locknut |
| 8 | Door Stay |



Tube-Line 550

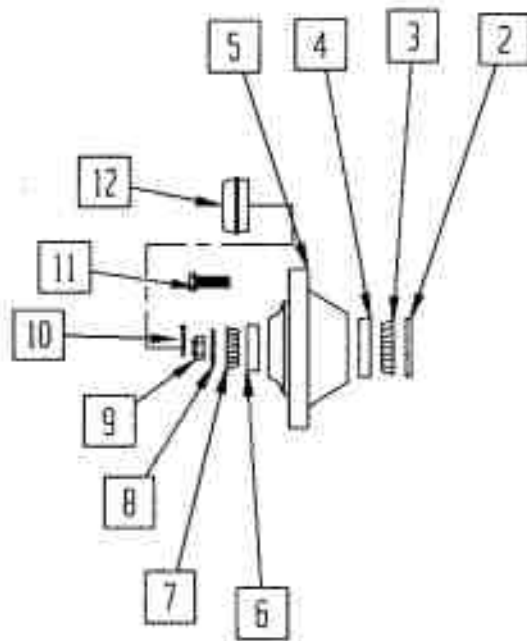
Drive wheel



- | | |
|----|-----------------------|
| 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 |

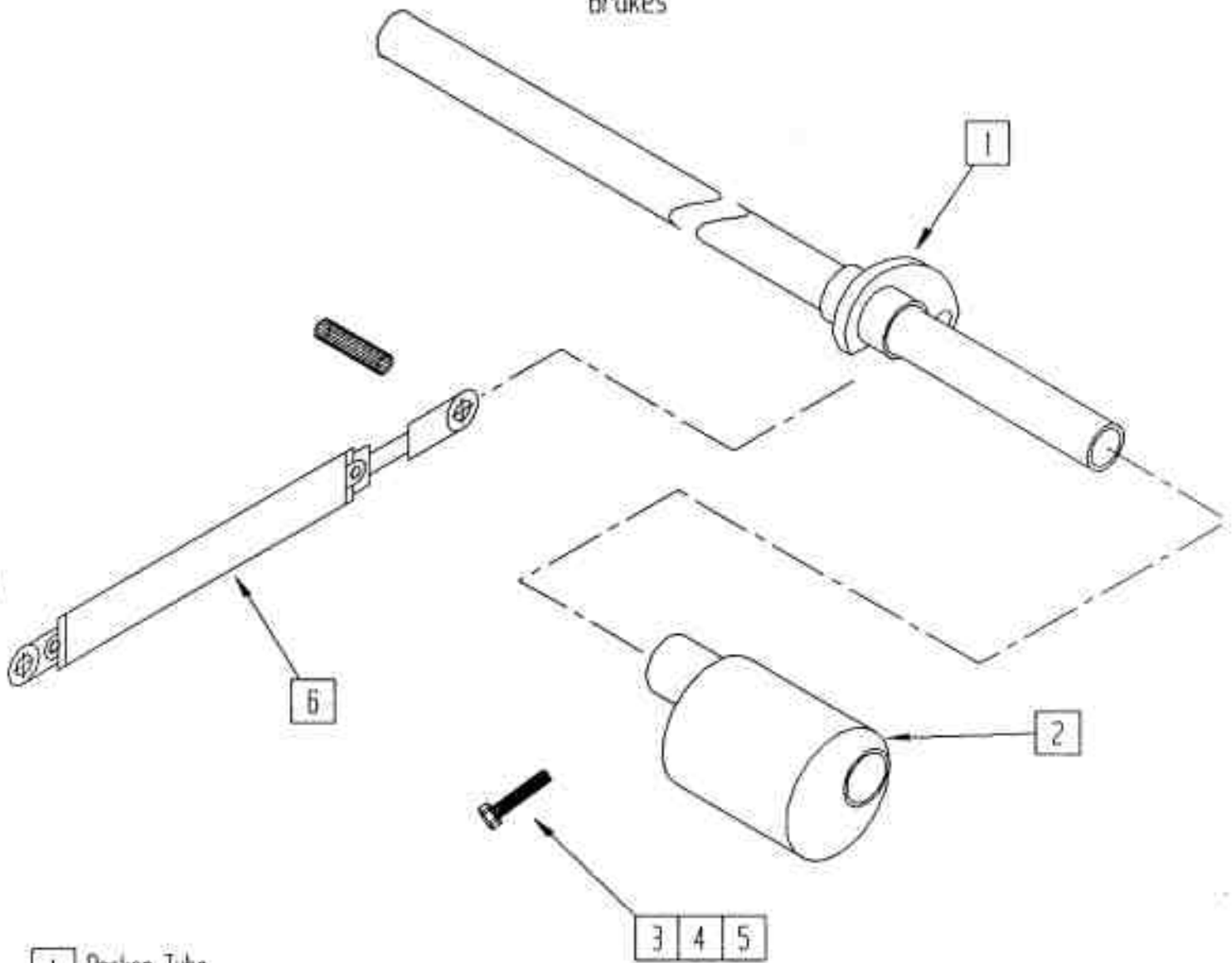
Tube-Line 550

Axle/spindle/hub



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

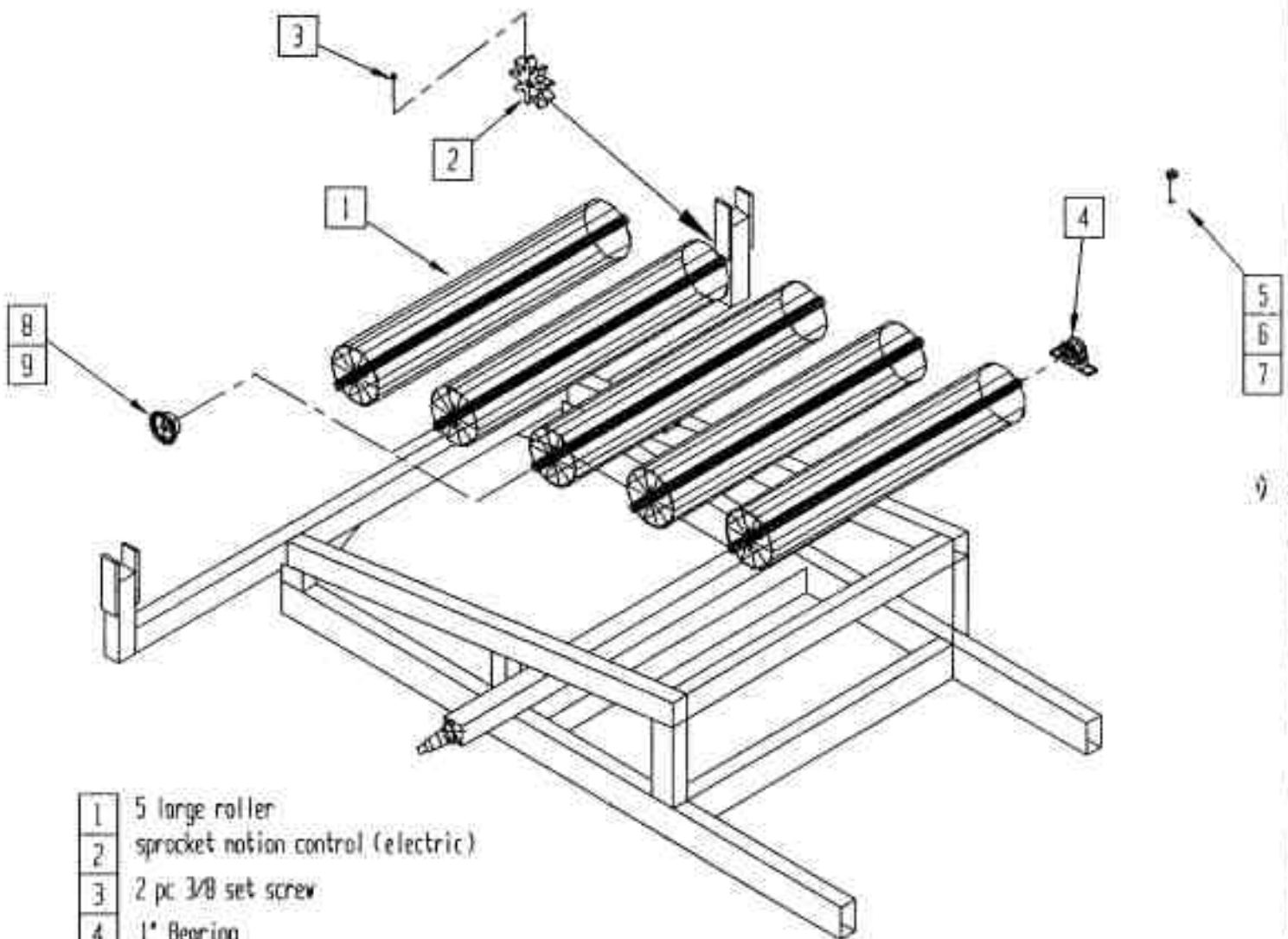
Tube - Line 550
Brakes



- | | |
|---|---------------------------|
| 1 | Rocker Tube |
| 2 | 2 pc broke eccentric |
| 3 | 2 pc 1/2 x 3 1/2 bolt |
| 4 | 2 pc lockwasher |
| 5 | 2 pc 1/2 nut |
| 6 | 2 x 16 hydraulic cylinder |

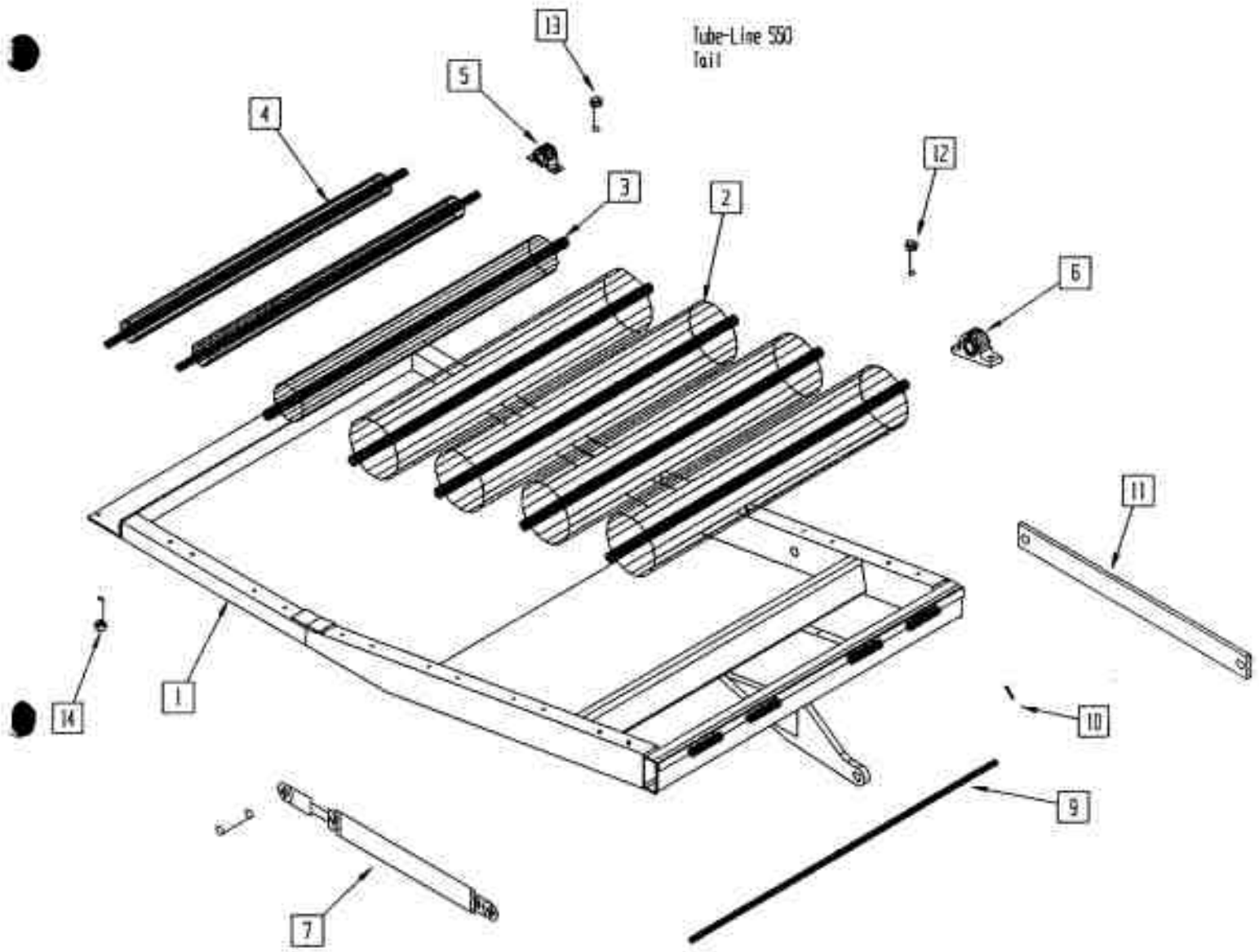
Tube-Line 550

rear roller



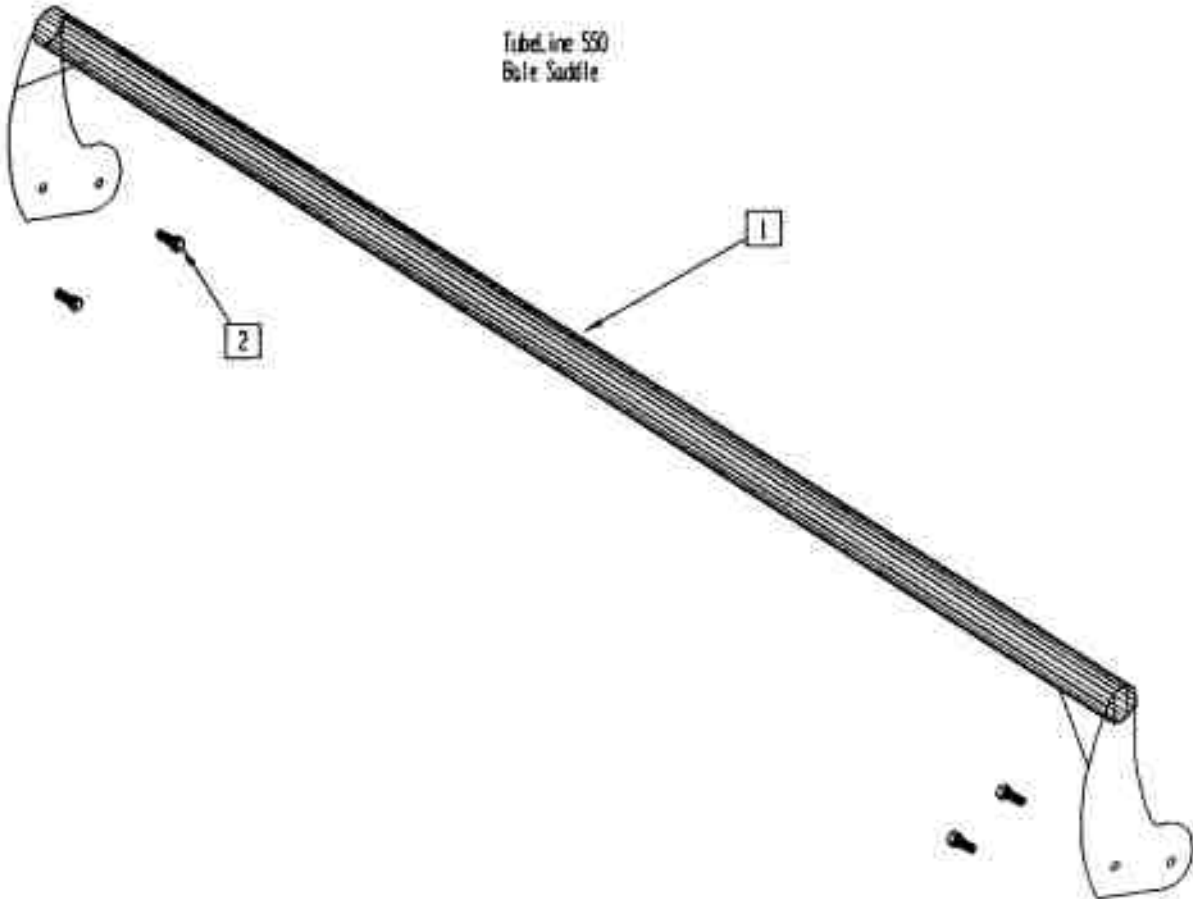
- | | |
|---|-------------------------------------|
| 1 | 5 large roller |
| 2 | sprocket motion control (electric) |
| 3 | 2 pc 3/8 set screw |
| 4 | 1" Bearing |
| 5 | 20 pc 3/8 x 1 3/4 Self tapping bolt |
| 6 | 20 pc 3/8 lockwasher |
| 7 | 20 pc 3/8 Flatwasher |
| 8 | 2 pc 40B20 Sprocket |
| 9 | # 40 Roller Chain |

Tube-Line 550
Tail



- | | |
|----|------------------------------------|
| 1 | Tail Base |
| 2 | 4 large roller |
| 3 | 1 pc 4" roller |
| 4 | 2 pc 2 3/8" roller |
| 5 | 4 pc 3/4" bearing |
| 6 | 10 pc 1" bearing |
| 7 | 2 X 16 hydraulic cylinder |
| 8 | hinge pin |
| 9 | cotter pin |
| 10 | tail tie bar |
| 11 | 3/8 x 1 3/4 self tapping bolt |
| 12 | 5/16 x 1 self tapping bolt |
| 13 | 4 pc 5/16 x 1 1/2 countersink bolt |

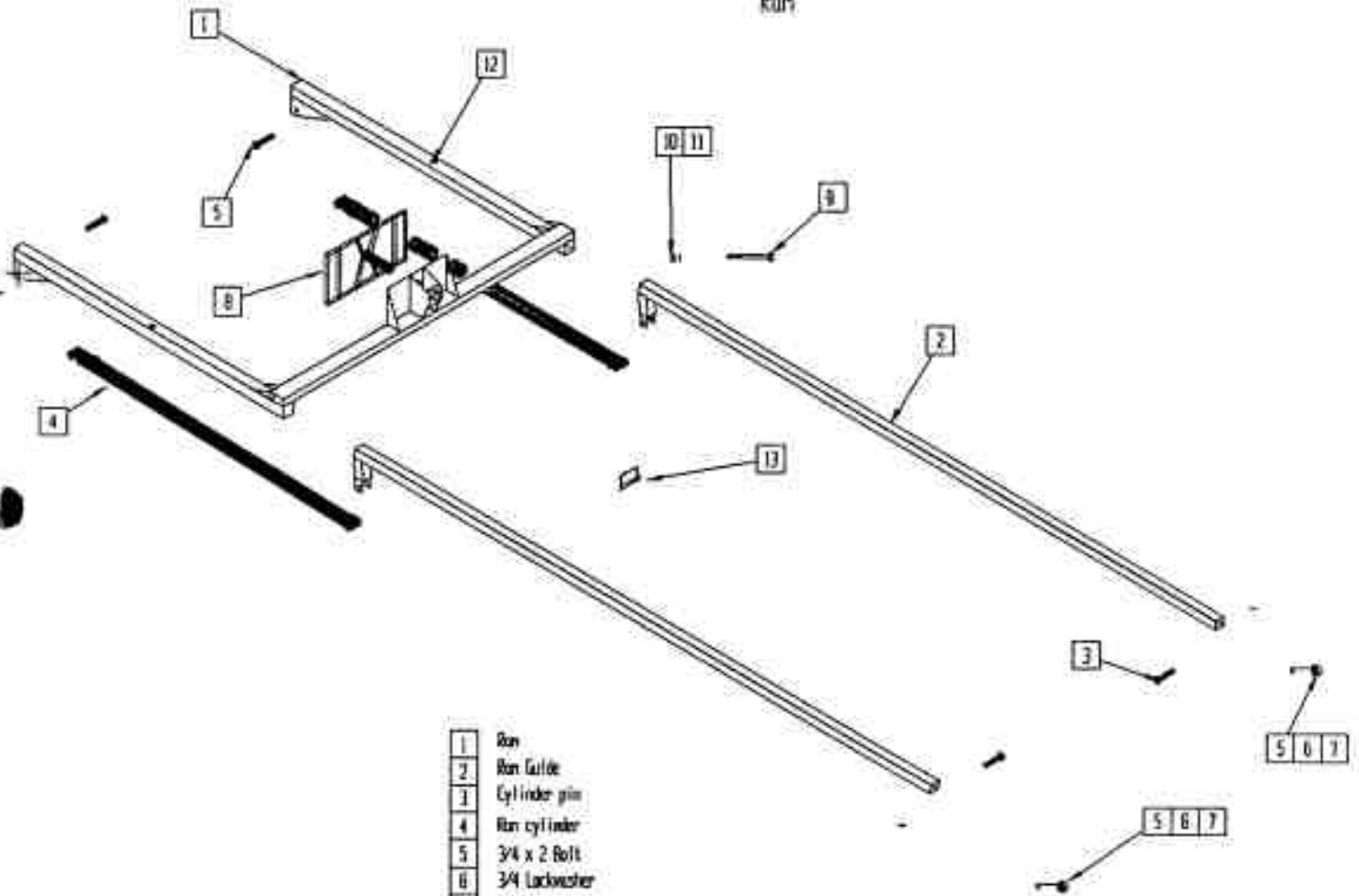
Tubeline 550
Bolt Saddle



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

Tube-Line 550

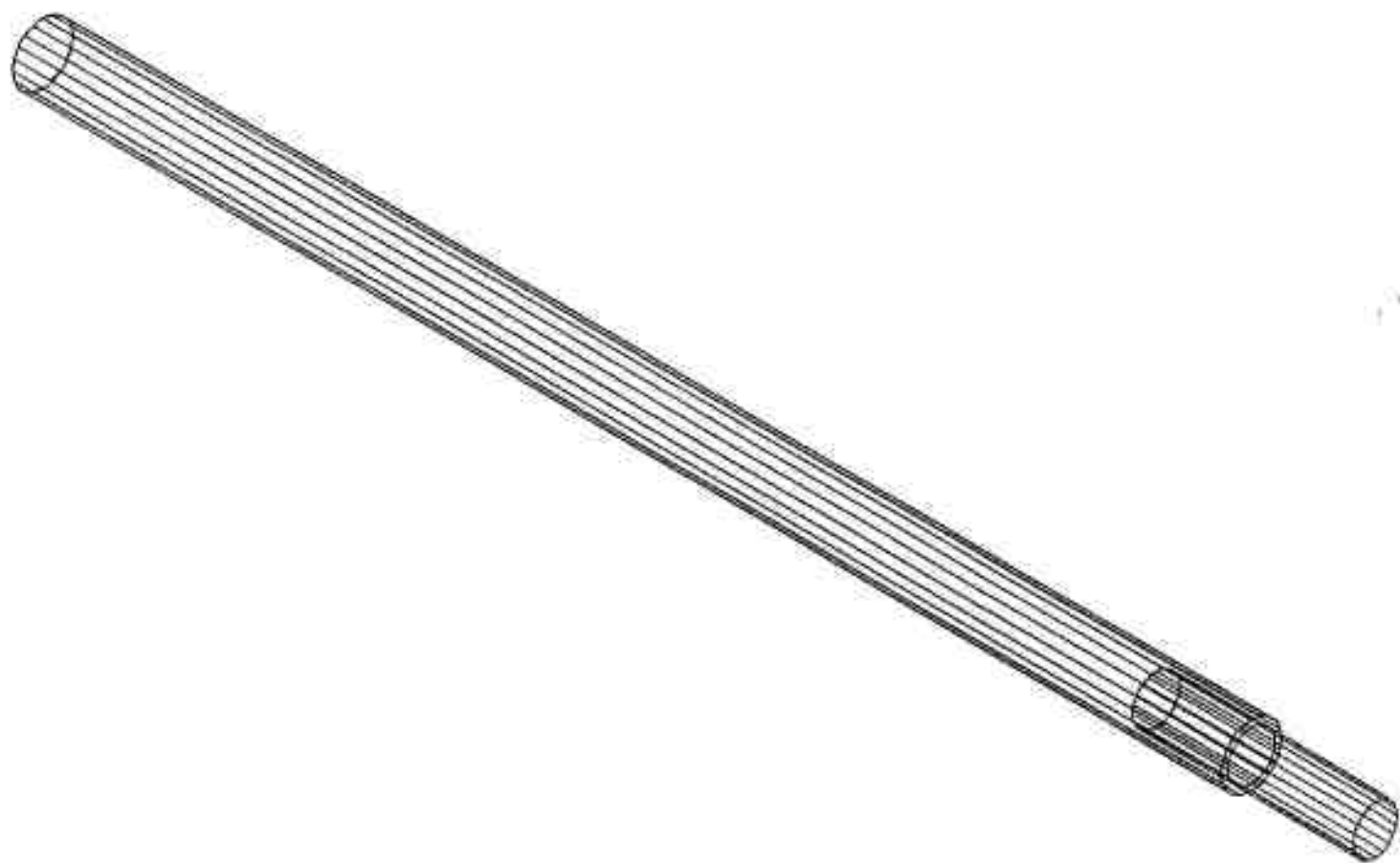
Ran



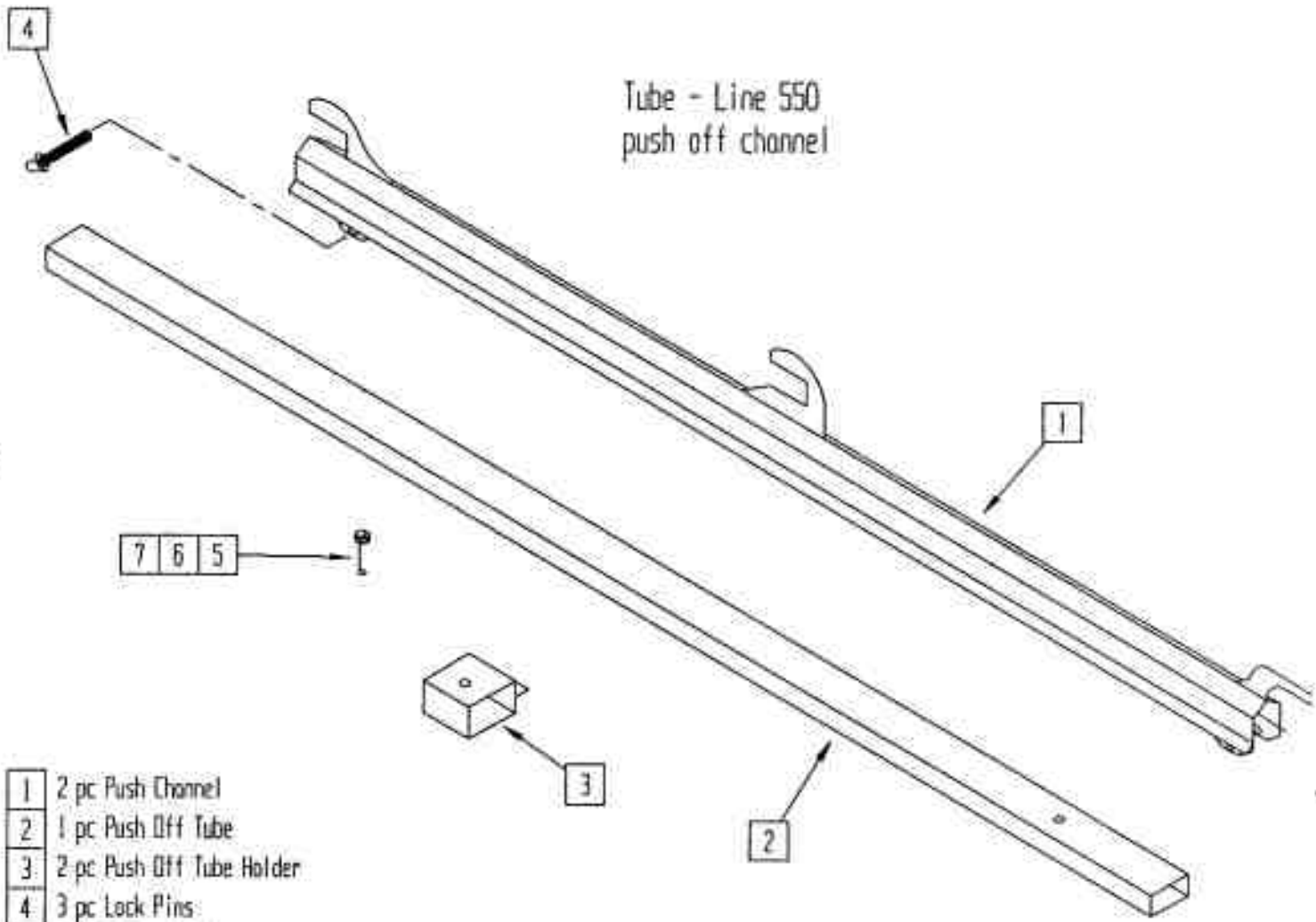
- | | |
|----|------------------------------|
| 1 | Ran |
| 2 | Ran Guide |
| 3 | Cylinder pin |
| 4 | Ran cylinder |
| 5 | 3/4 x 2 Bolt |
| 6 | 3/4 Lockwasher |
| 7 | 3/4 Flatwasher |
| 8 | Push Plate |
| 9 | 2 pc 1/2 x 4 bolt |
| 10 | 2 pc 1/2 nut |
| 11 | 2 pc 1/2 lockwasher |
| 12 | 2 pc 1/4 - 28 grease fitting |
| 13 | Plate Lock Pin |

Tube-Line 550

Push tube



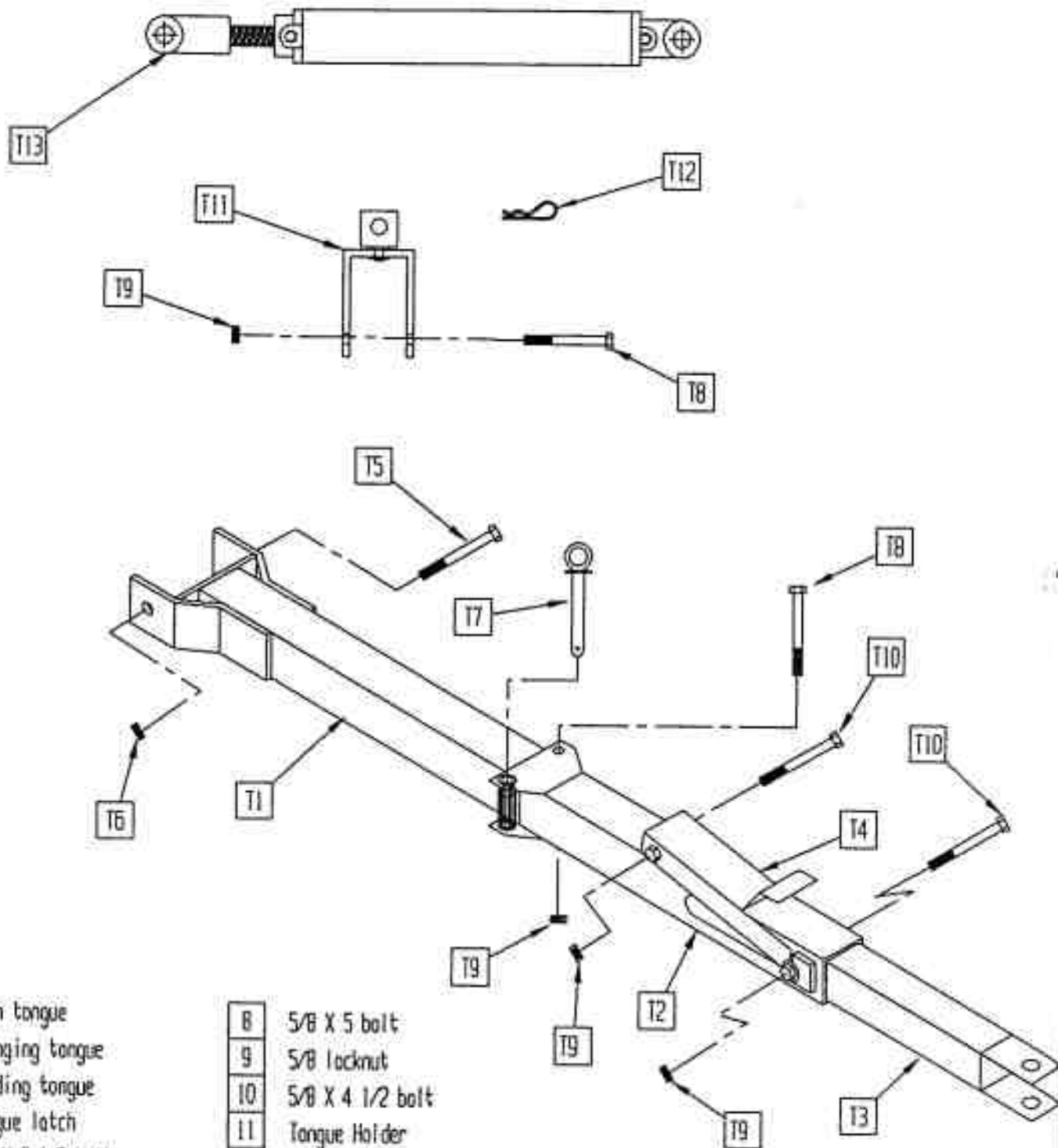
Tube - Line 550
push off channel



- 1 2 pc Push Channel
- 2 1 pc Push Off Tube
- 3 2 pc Push Off Tube Holder
- 4 3 pc Lock Pins
- 5 4 pc 3/8 x 1 bolt
- 6 4 pc 3/8 nut
- 7 4 pc 3/8 lockwasher

Tube-Line 550

Tongue



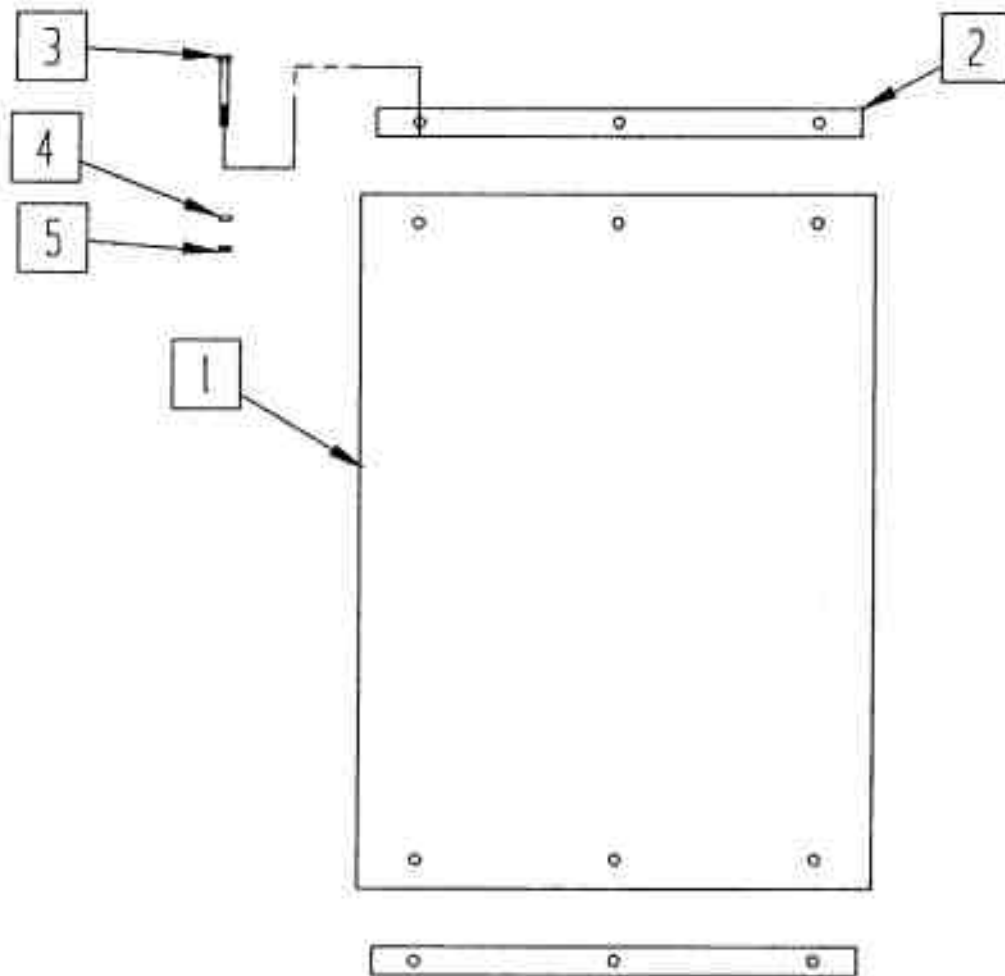
- | | |
|---|------------------|
| 1 | Main tongue |
| 2 | Swinging tongue |
| 3 | Sliding tongue |
| 4 | Tongue latch |
| 5 | 3/4 X 8 1/2 bolt |
| 6 | 3/4 locknut |
| 7 | Tongue pin |

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

TSFT2

Tube-Line 550

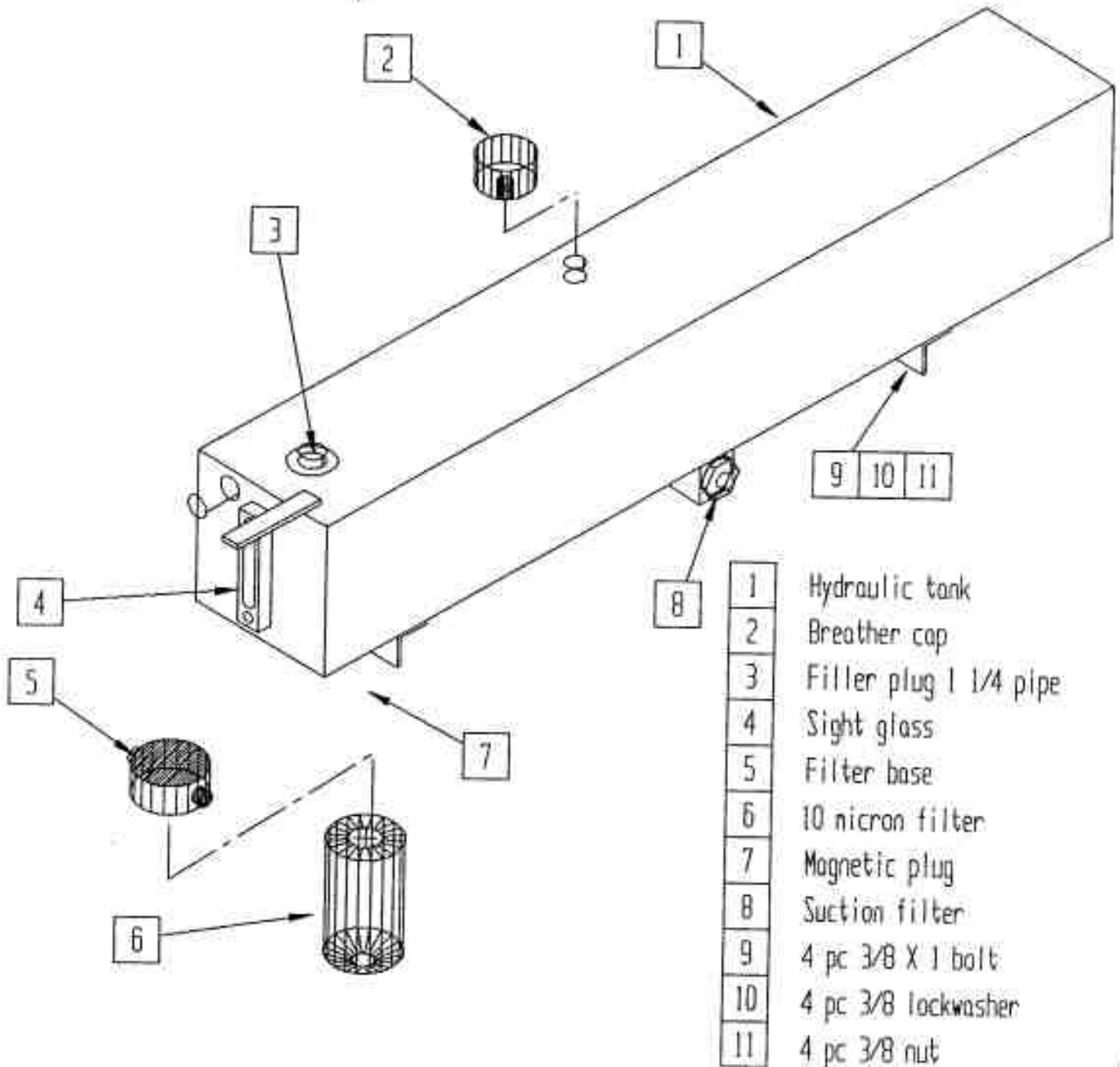
Mud Flap



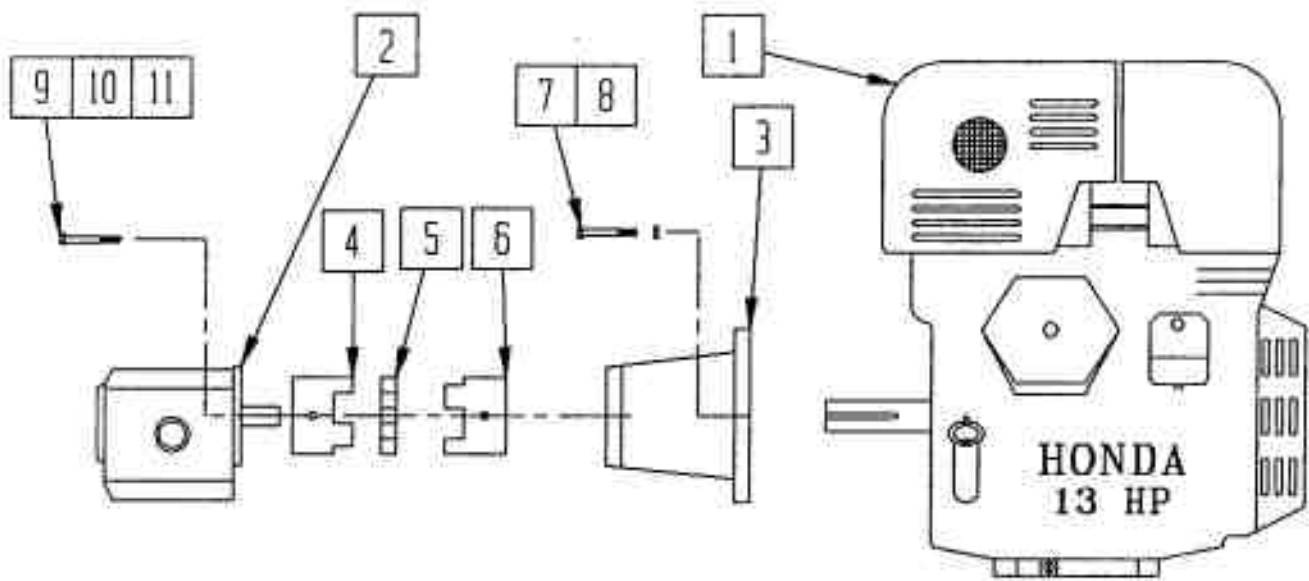
1	mud flap
2	metal strip
3	bolt
4	lockwasher
5	nut

Tube-Line 550

Hydraulic tank



Tube-Line 550

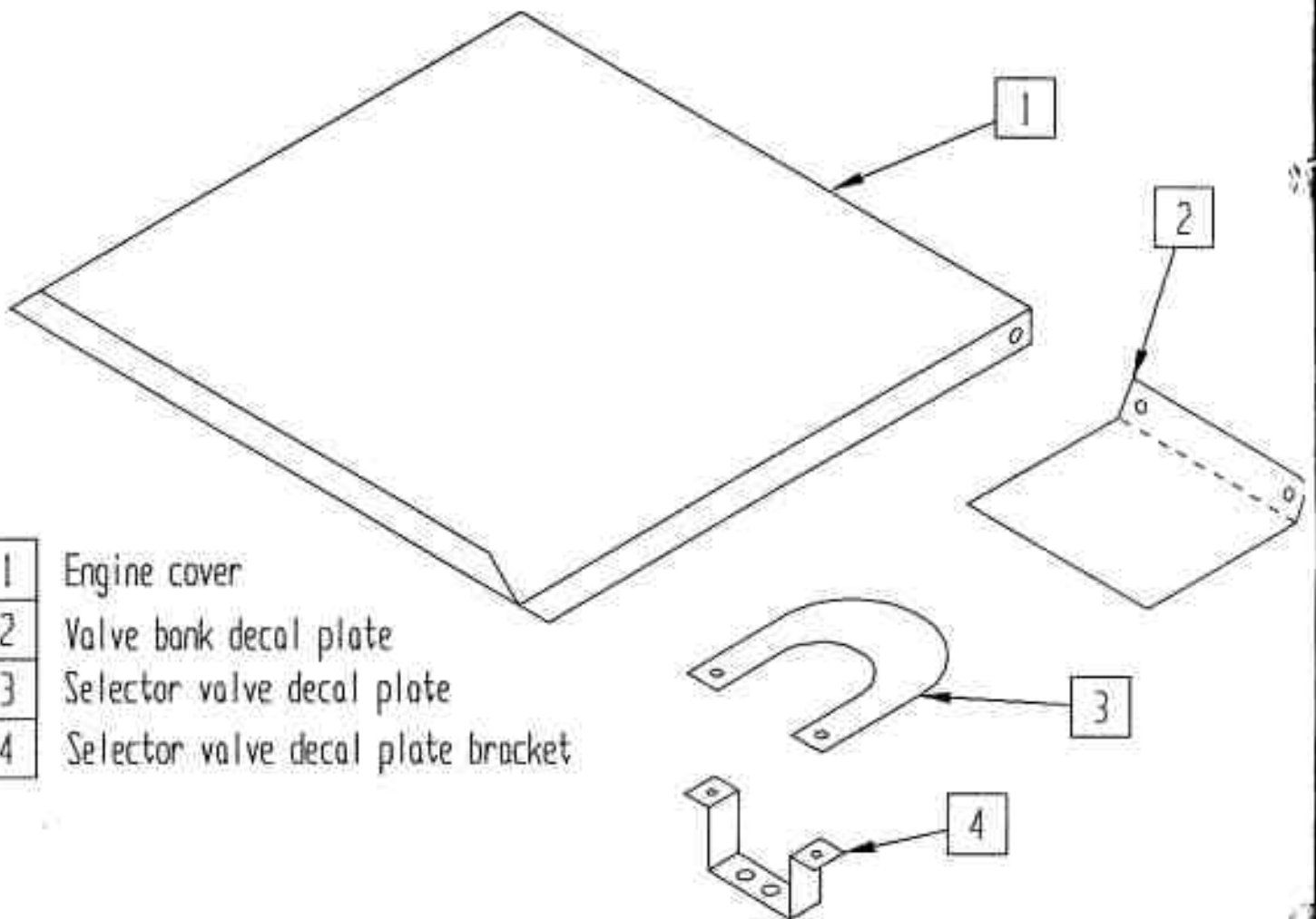


1	13 Hp HONDA Engine
2	Hydraulic Pump
3	Engine to pump adaptor
4	Love Joy Coupling
5	Coupling spacer
6	Love Joy Coupling engine

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

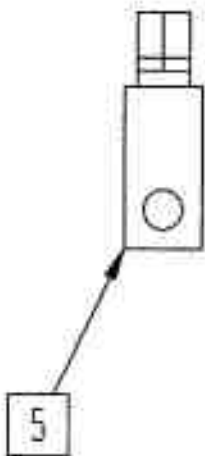
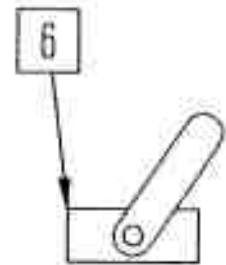
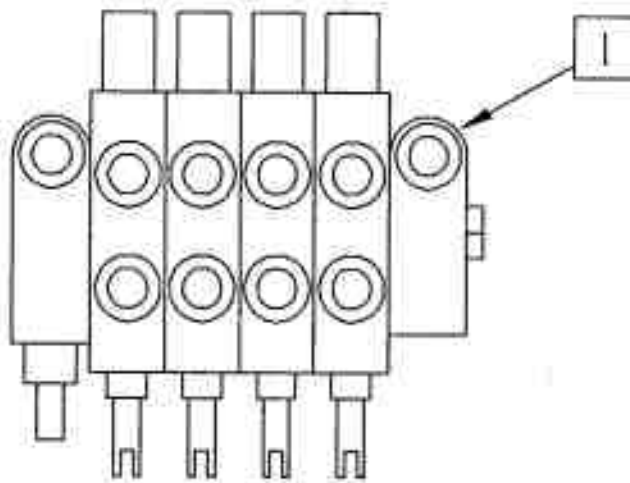
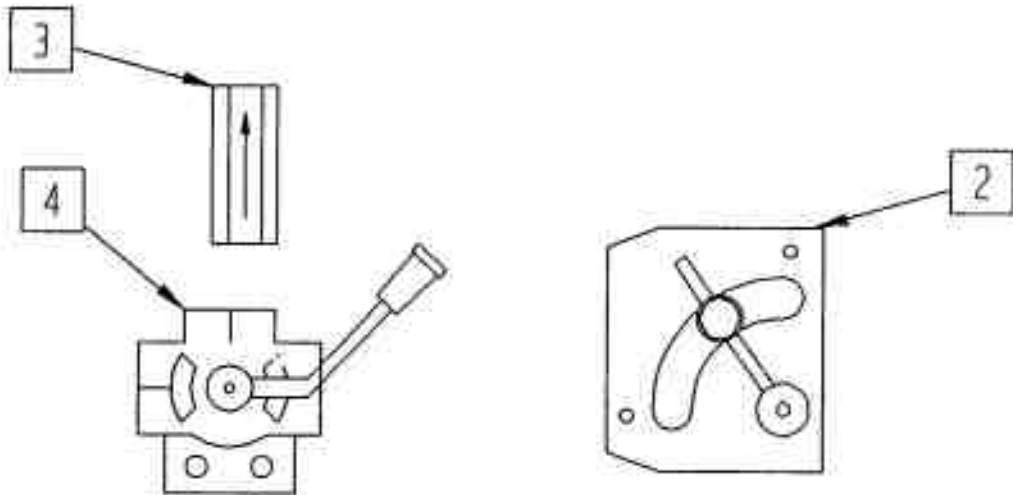
Tube-Line 550

Engine cover & decal plate



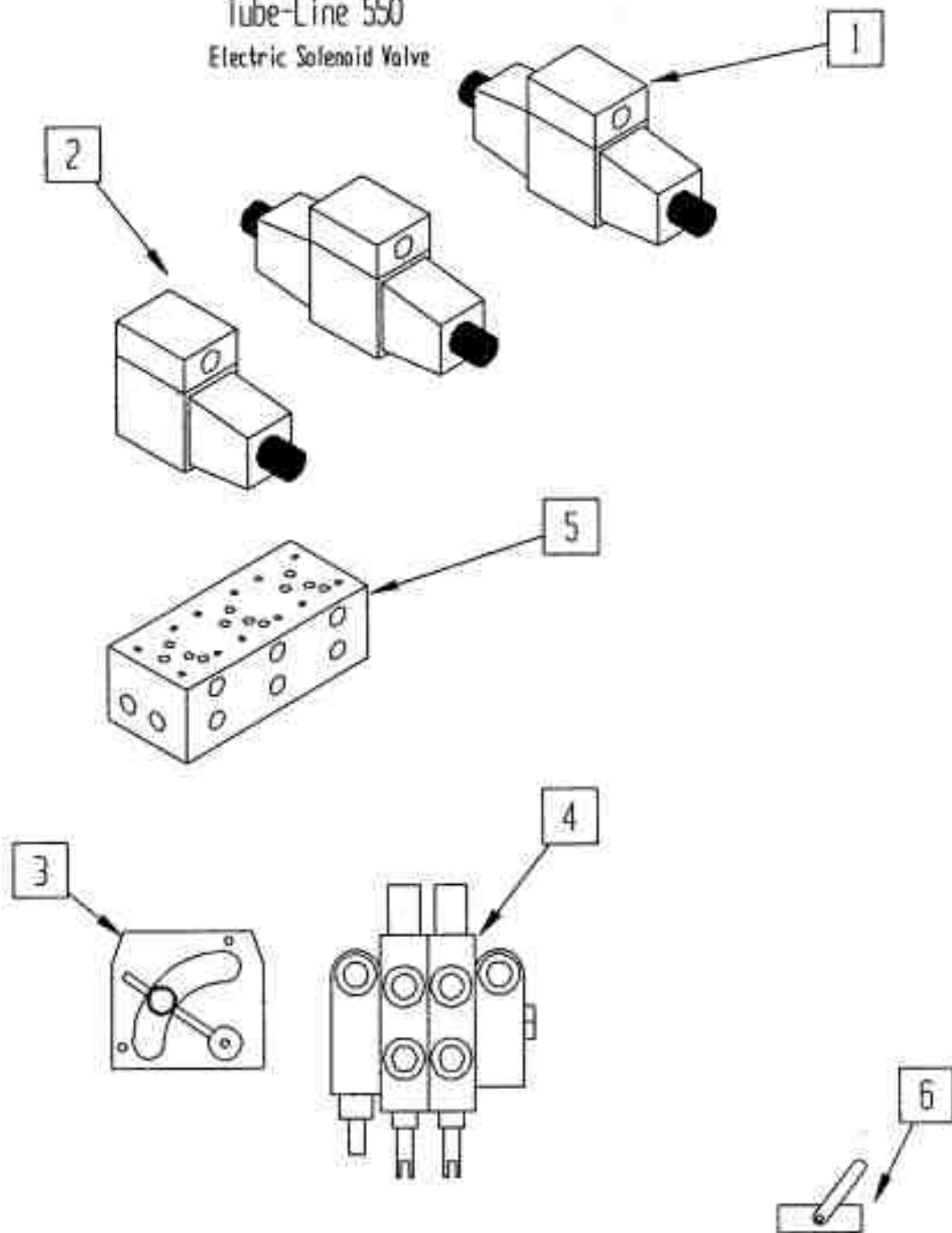
- | | |
|---|------------------------------------|
| 1 | Engine cover |
| 2 | Valve bank decal plate |
| 3 | Selector valve decal plate |
| 4 | Selector valve decal plate bracket |

Tube-Line 550
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 |

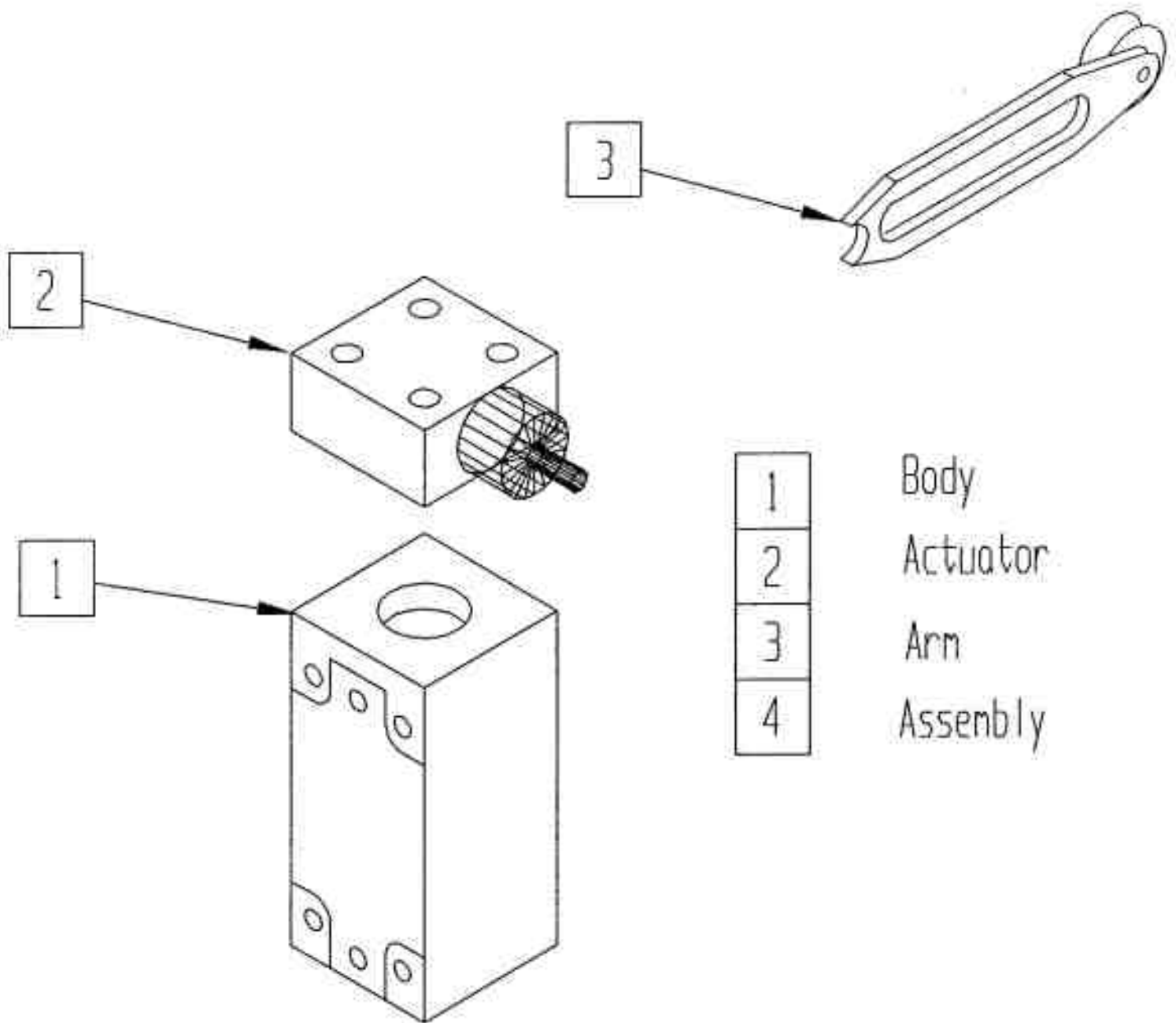
Tube-Line 550
Electric Solenoid Valve



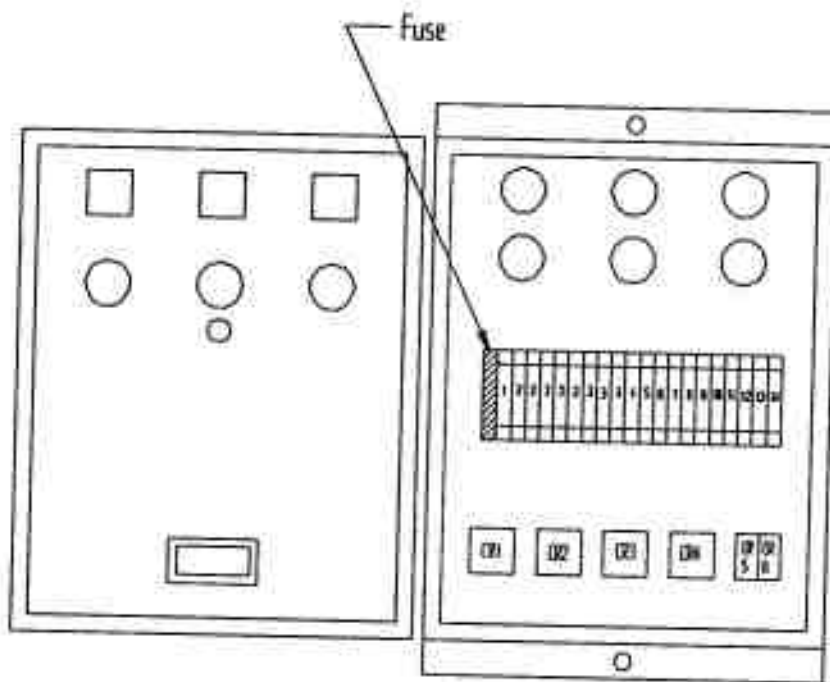
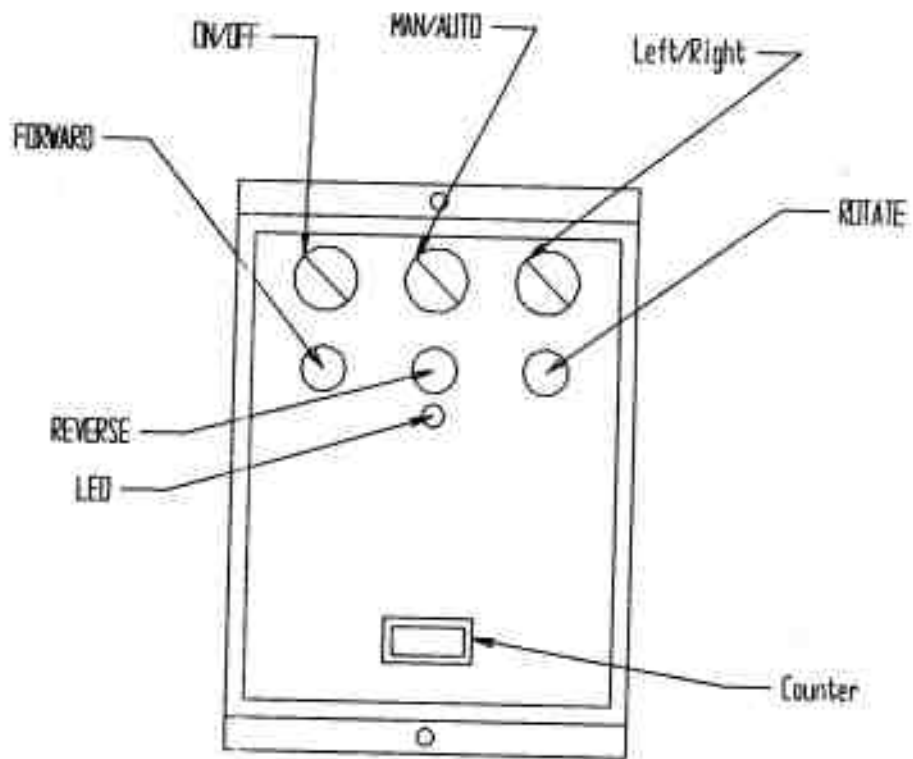
- | | |
|---|--|
| 1 | 2 pc VS12M3LGB75L tandem center 12 vdc |
| 2 | VS12M1AGB75L single sol 12 vdc |
| 3 | RD - 150 - 08 Flow control |
| 4 | 2 spool nonblock valve |
| 5 | Triple manifold |
| 6 | Ball Valve |

Tube-Line 550

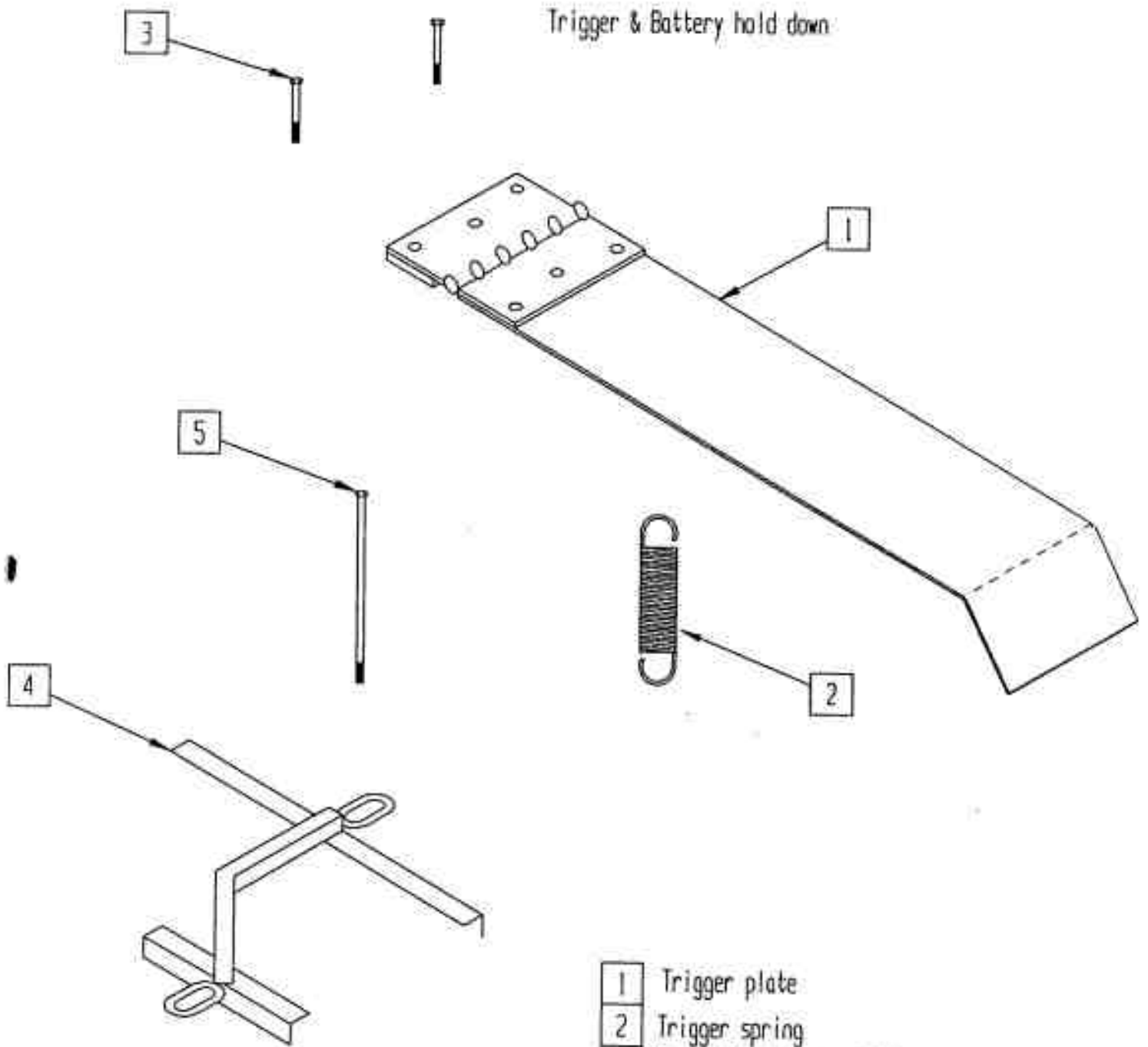
Limit Switch



Tube-Line 550 Control Panel

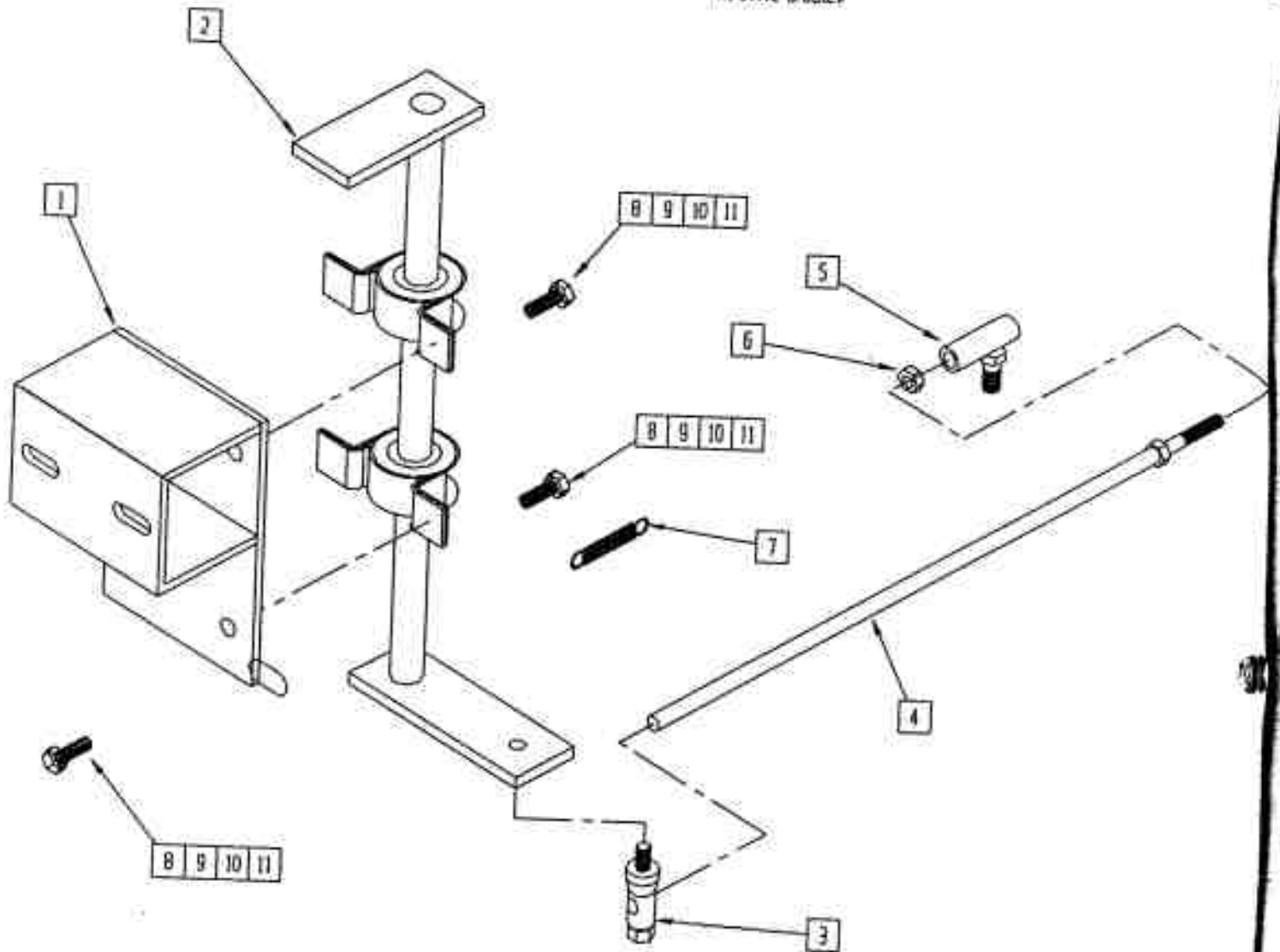


Tube-Line 550



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

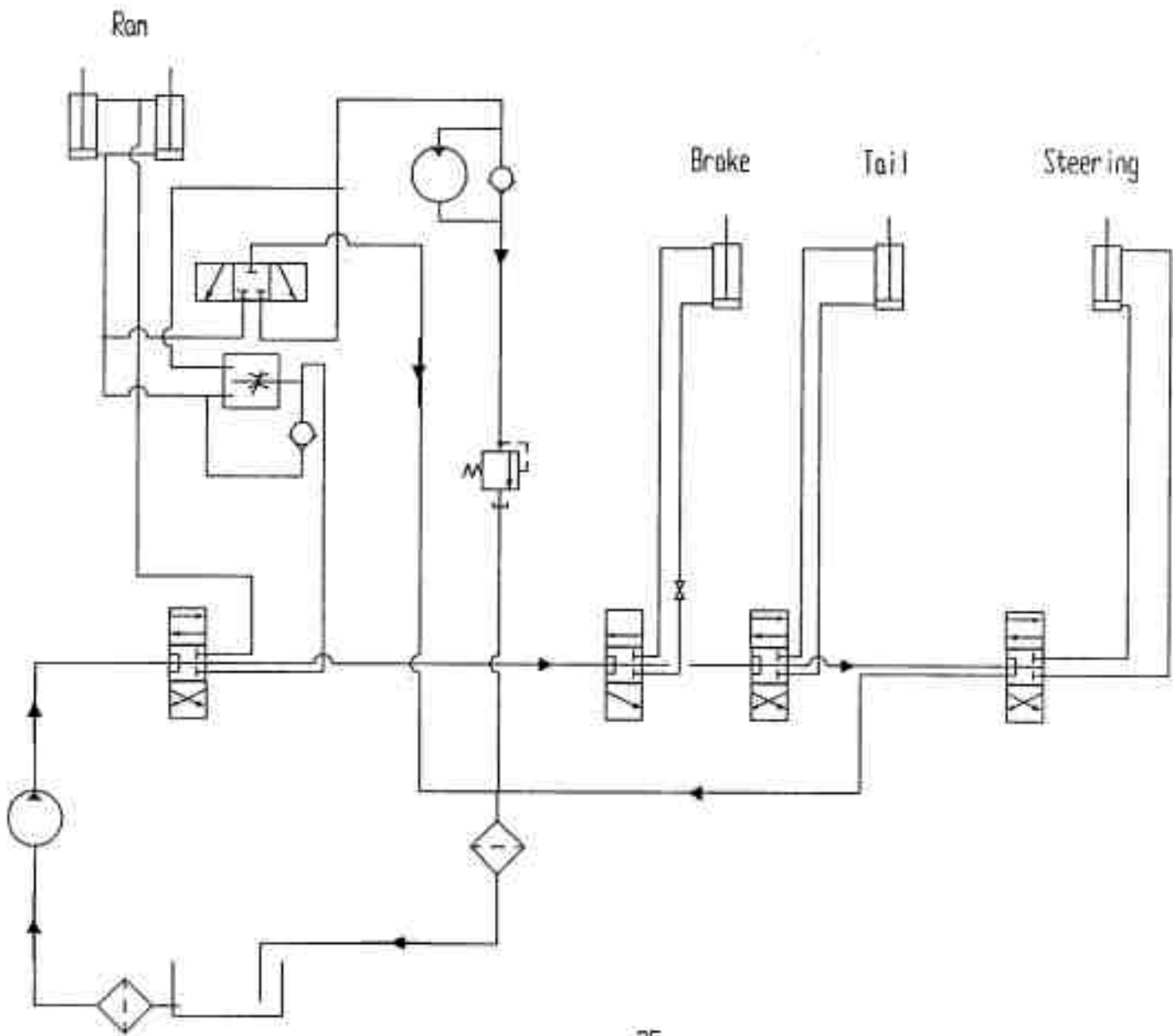
Tubeline 550
Throttle Bracket



- | | |
|----|------------------------|
| 1 | Throttle mount bracket |
| 2 | Throttle arm |
| 3 | Throttle Linkage pivot |
| 4 | Throttle Link |
| 5 | Throttle ball joint |
| 6 | 1/4-28 nut |
| 7 | Throttle spring |
| 8 | 5/16 x 1 bolt |
| 9 | 5/16 nut |
| 10 | 5/16 flat washer |
| 11 | 5/16 lockwasher |

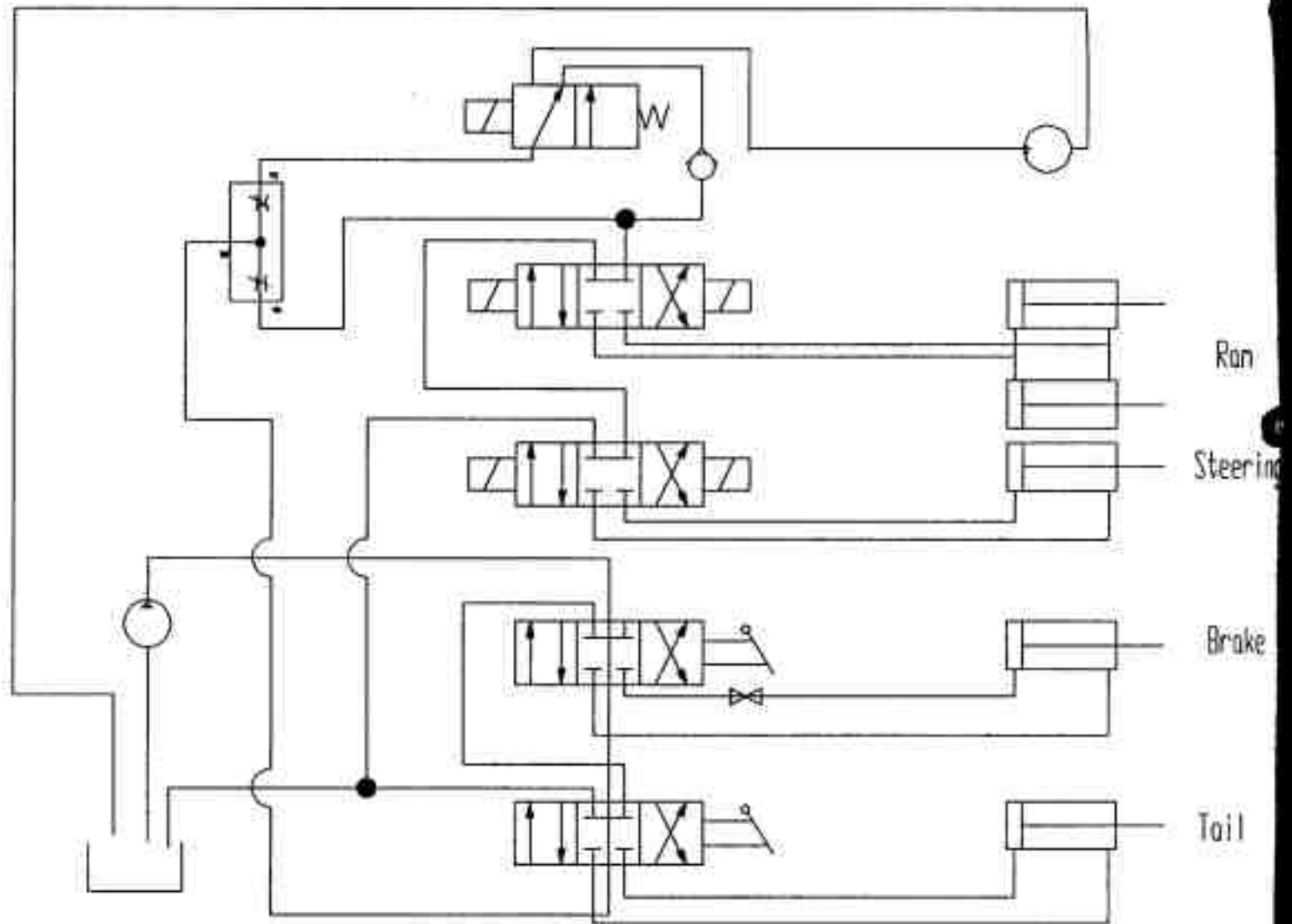
Tube-Line 550

Manual Hydraulic Schematic

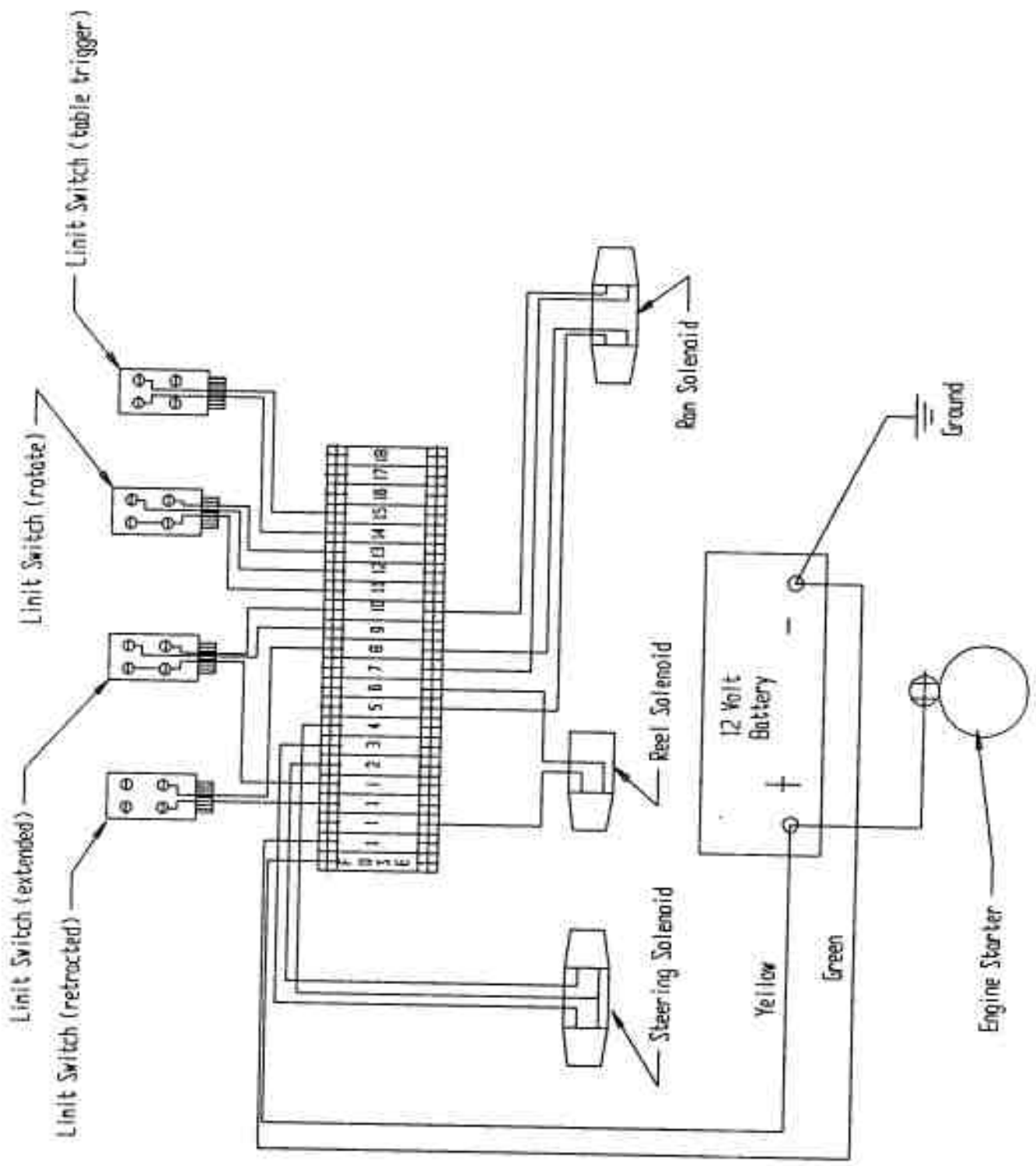


TubeLine 550

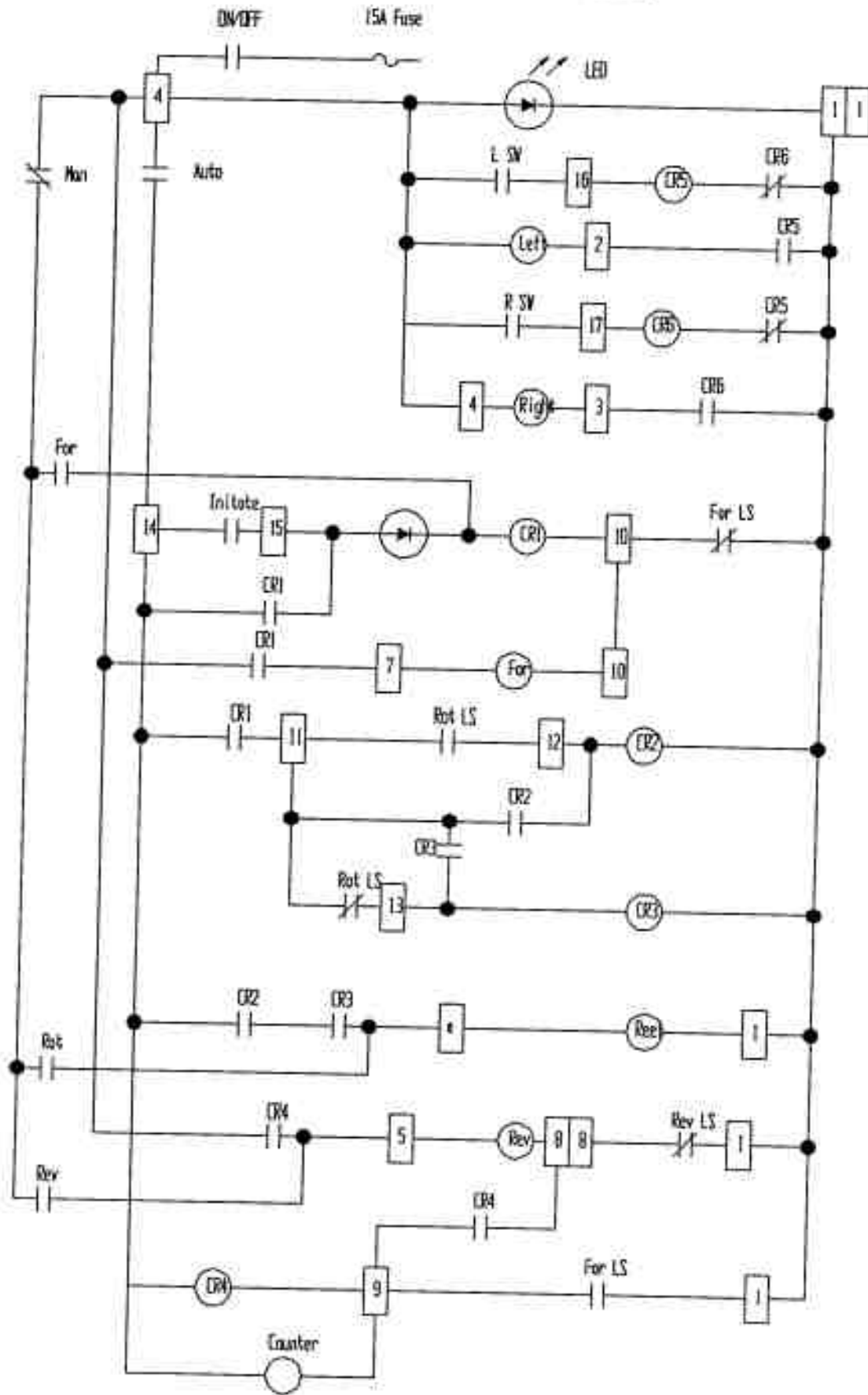
Electric Hydraulic Schematic



Electric Wiring Diagram



Tube - Line 550
Electric Control Panel Schematic



Tube-Line 5500

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. Engine throttle is activated by ram cylinder.

- 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 5550

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 and tail 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 - "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. 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. Ram slider has bracket welded on that will slow engine down. Throttle spring will speed engine up as soon as Ram cylinder starts to extend.

- 5 When "Man-Auto" switch is turned to Auto, Push-buttons switches no longer function. Depress trigger switch located on bale table, Ram hydraulic valve is energised. The ram cylinder will extend and engine will speed up 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 will turn off, the ram cylinder will stop and engine will idle down.

- 6 Steering is done by steering switch right / left activating steering double solenoid valve A or B. This valve will work in either manual or automatic mode.

Tube - Line 5500

Part Numbers

<u>Page #</u>	<u>Ref #</u>	<u>Part #</u>	<u>Qty</u>	<u>Description</u>	
1	1	550-100-001	1	Hoop Outer Ring	240.38
1	2	550-100-002	1	Hoop inner Ring	169.47
1	3	550-100-003	4	Mounting Bolt 1/2 x 2	.15
1	4	500-100-076	4	1/2 Nut	.06
1	5	500-100-075	5	1/2 Lockwasher	.05
2	2	500-100-014	8	4 in Wheel	6.80
2	3	500-100-015	8	Axle Bolt	2.02
2	4	500-100-016	16	Bearing Seal	
2	5	500-100-017	8	Outer Race	
2	6	500-100-018	8	Roller Bearing	
2	7	500-100-019	8	Inner Race	
2	8	500-100-020	8	Locknut	
3	1	550-100-004	2	Main Wrap Bracket	114.58
3	2	550-100-005	4	1-14 UNF Locknut	1.15
3	3	550-100-006	4	Tensioner Roller	
3	4	550-100-007	8	3/4 Flange Bearing	
3	5	550-100-008	2	Small Gear	
3	6	550-100-009	2	Large Gear	
3	7	550-100-010	2	Gear Cover	15.83
3	8	550-100-011	2	Spool Holder	4.65
3	9	550-100-012	4	Wrap Spool	20.00
3	10	550-100-013	8	Washer	
3	11	550-100-014	4	Locknut	
3	12	550-100-015	4	Oilite Bushing	2.36
3	13	500-100-022	2	Plastic Pipe	3.30
3	14	500-100-021	4	Plastic Bearing	3.23
3	15	550-100-016	4	Bracket	1.30
3	16	550-100-017	4	Spacer	.40
3	17	500-100-135	4	Spring	1.04
3	18	550-100-018	2	Axle Plastic Roller	6.04
3	19	550-100-003	2	1/2 x 2 Bolt c/w Locknut	
3	20	550-100-019	16	5/16 Carriage Bolt	
3	21	550-100-020	4	3/16 Keystock	.25
3	22	550-100-021	2	Grease Fitting	.35
4	1	550-100-022 R	1	Right Side Safety Door Bracket	50.48
4	1	550-100-023 L	1	Left Side Safety Door Bracket	50.48
4	2	550-100-024 R	1	Right Safety Door	97.70
4	2	550-100-025 L	1	Left Safety Door	97.70
4	3	500-100-041	2	Rubber Latch	5.36
4	4	500-100-040	2	Pin	
4	5	500-100-042	2	Cotter pin	
4	6	500-100-119	6	3/8 x 1 1/4 Bolt	
4	7	550-100-026	6	3/8 Locknut	
4	8	550-100-027	2	Door Stay	4.30

