

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

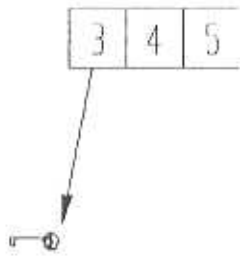
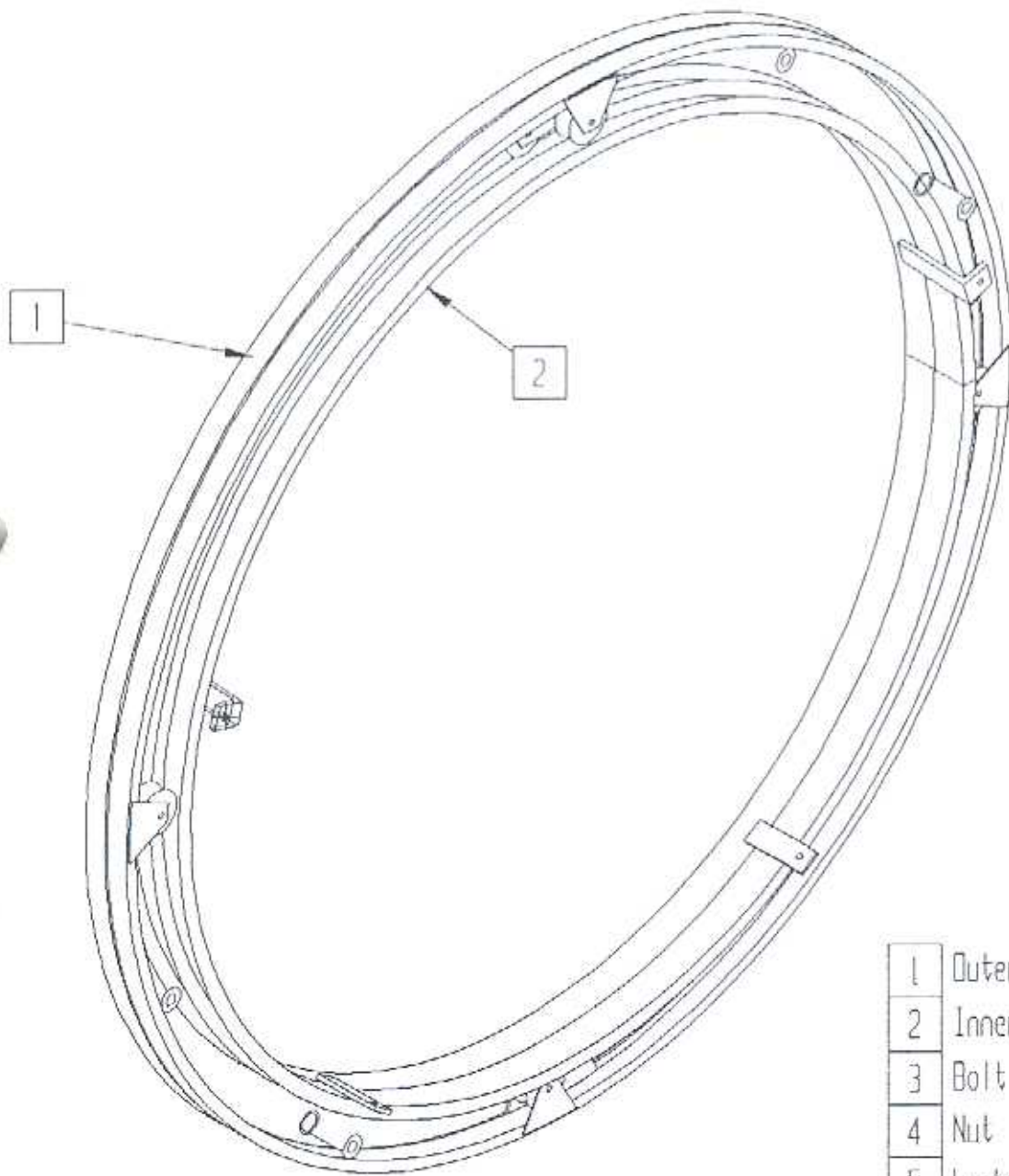
Engine is stopped by grounding ignition, in case of ignition failure make sure that stop switch wire is not shorting to frame and engine switch is not in closed position.

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
Parts Manual
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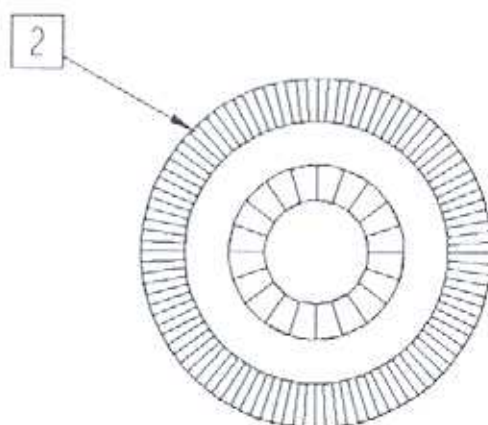
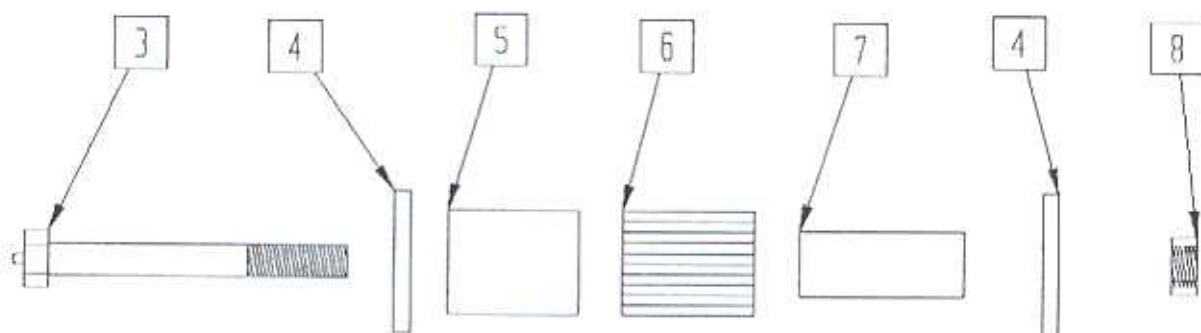
Tube-Line 550 Hoop



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

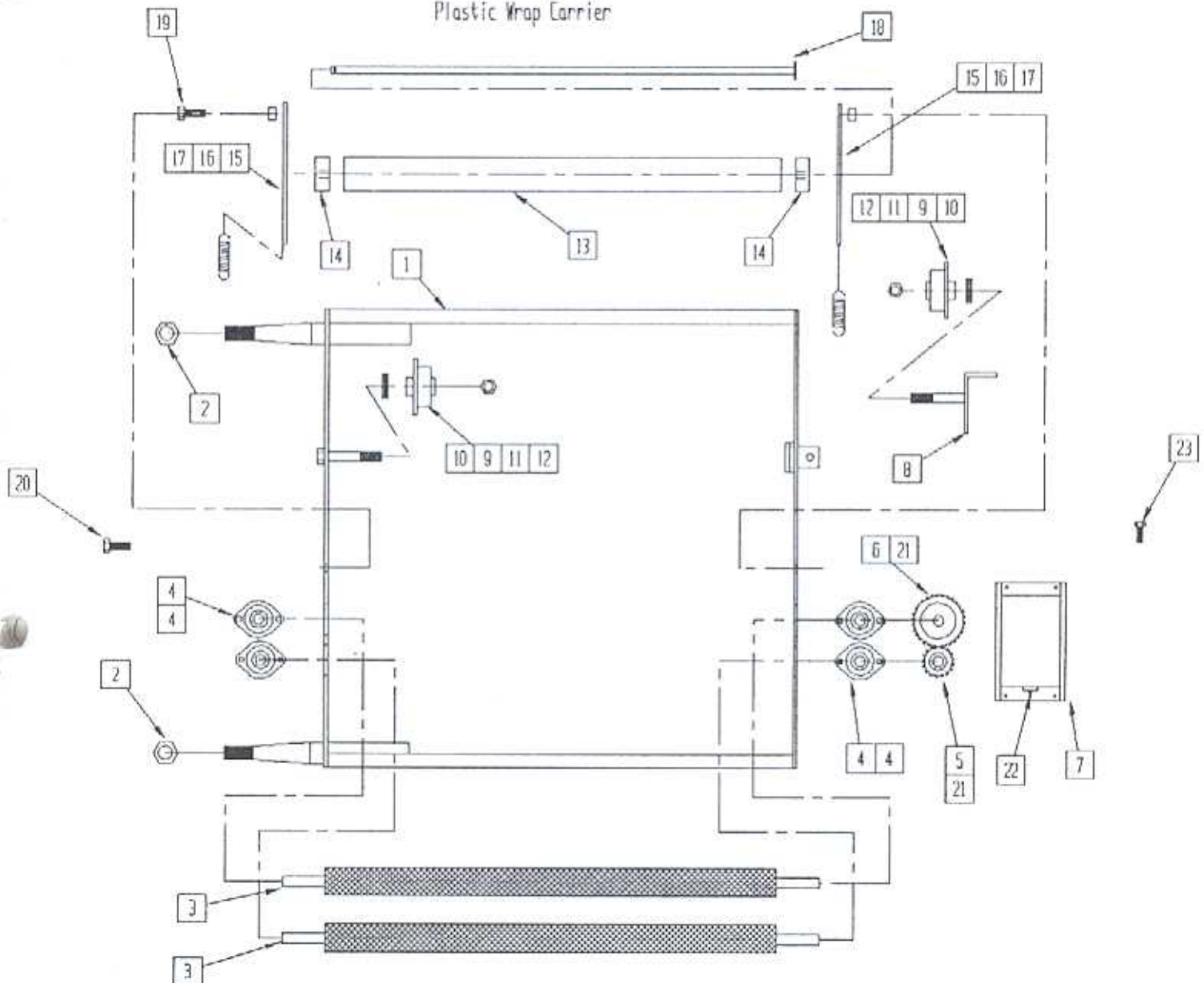
Tube-Line 550

Hoop wheels

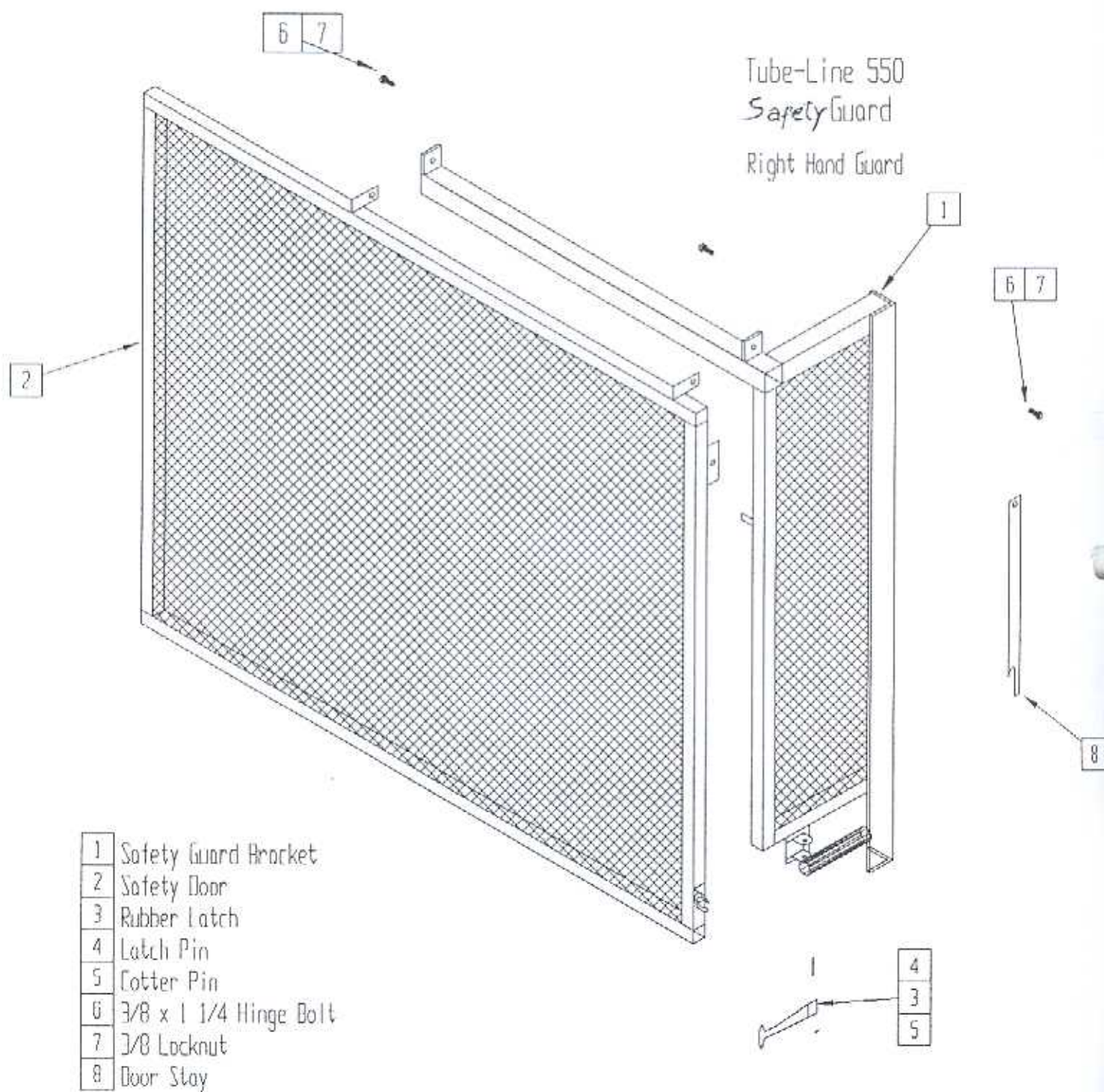


2	4 in wheel
3	axle bolt
4	bearing seal
5	outer race
6	roller bearing
7	inner race
8	locknut

Tube - Line 550
Plastic Wrap Carrier

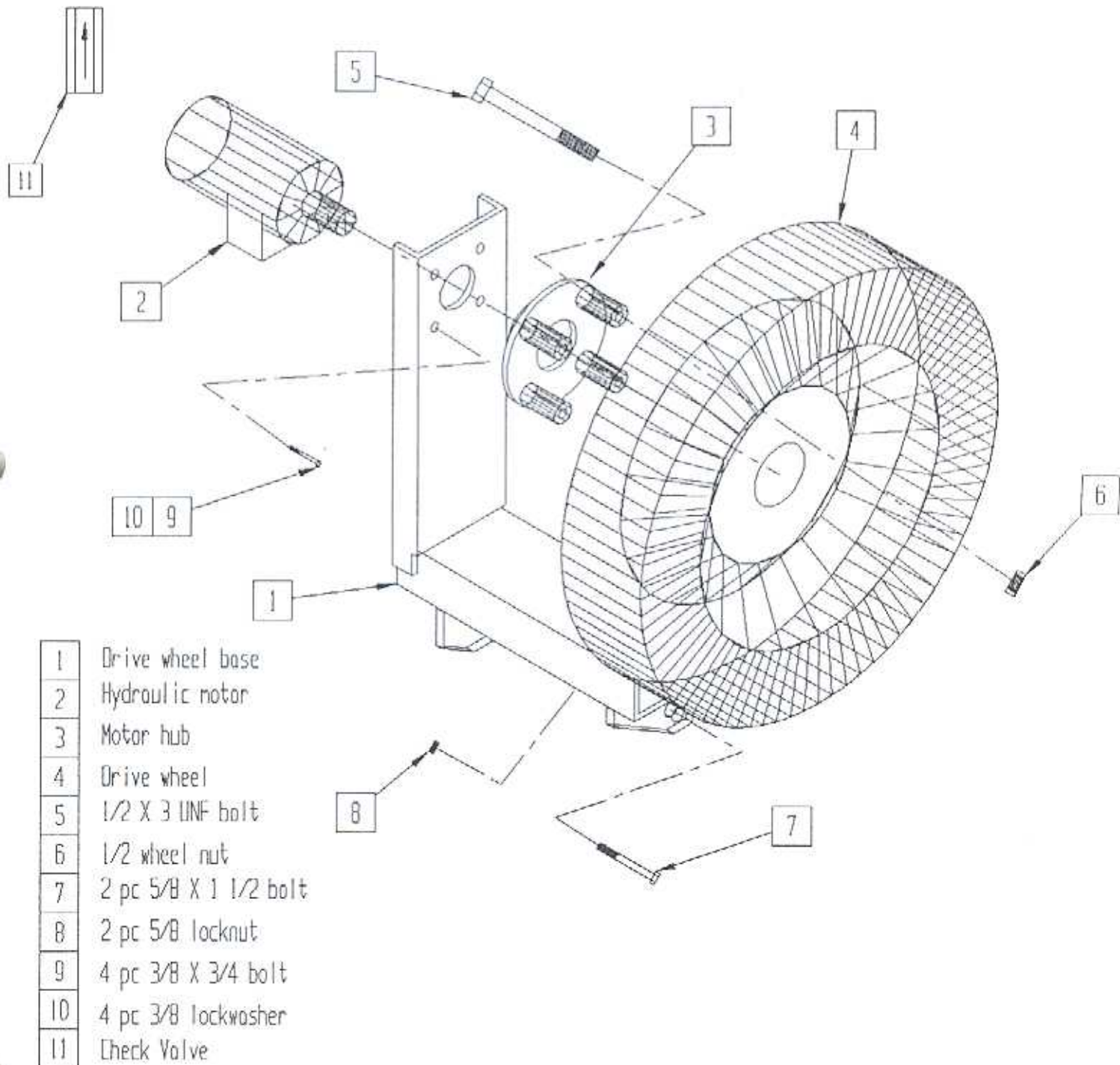


- | | | | |
|----|--------------------|----|--------------------------|
| 1 | Main Wrap Bracket | 13 | ABS Pipe |
| 2 | 1-14 UNC Nut | 14 | HMPC Bearing |
| 3 | Tensioner Roller | 15 | ABS Bracket |
| 4 | 3/4 Bearing | 16 | Spacer |
| 5 | Small Gear | 17 | Spring |
| 6 | Large Gear | 18 | ABS Axle |
| 7 | Gear Cover | 19 | 1/2 x 2 Bolt |
| 8 | Spool Holder | 20 | 5/16 Carriage Bolt |
| 9 | Plastic Wrap Spool | 21 | 3/16 Keystock |
| 10 | 5/8 Flat washer | 22 | Grease Fitting |
| 11 | 5/8 Nylocknut | 23 | 10-24 x 3/4 Machine Bolt |
| 12 | Dillite Bearing | | |



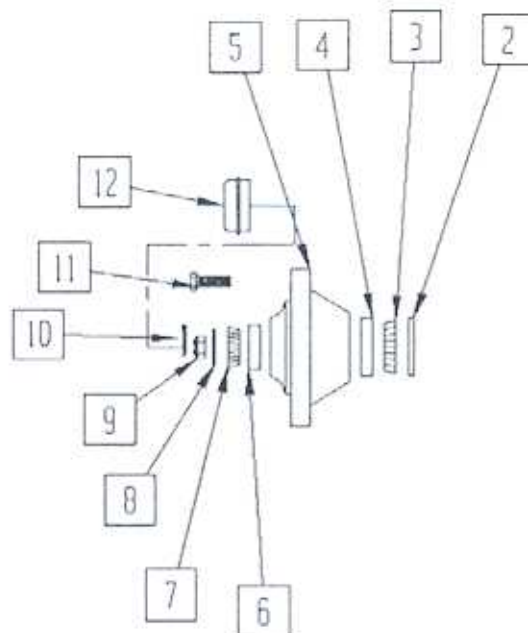
Tube-Line 550

Drive wheel



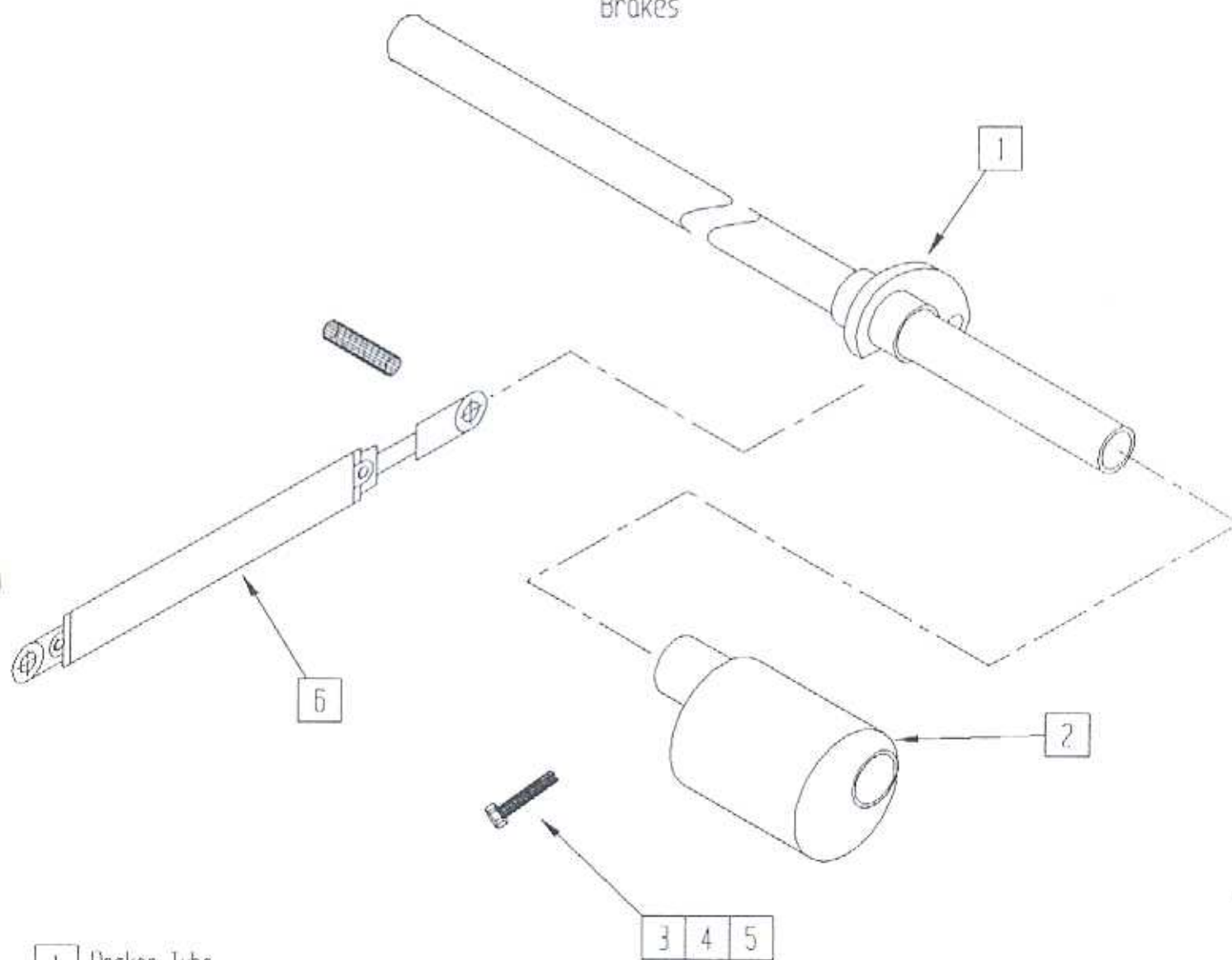
Tube-Line 550

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

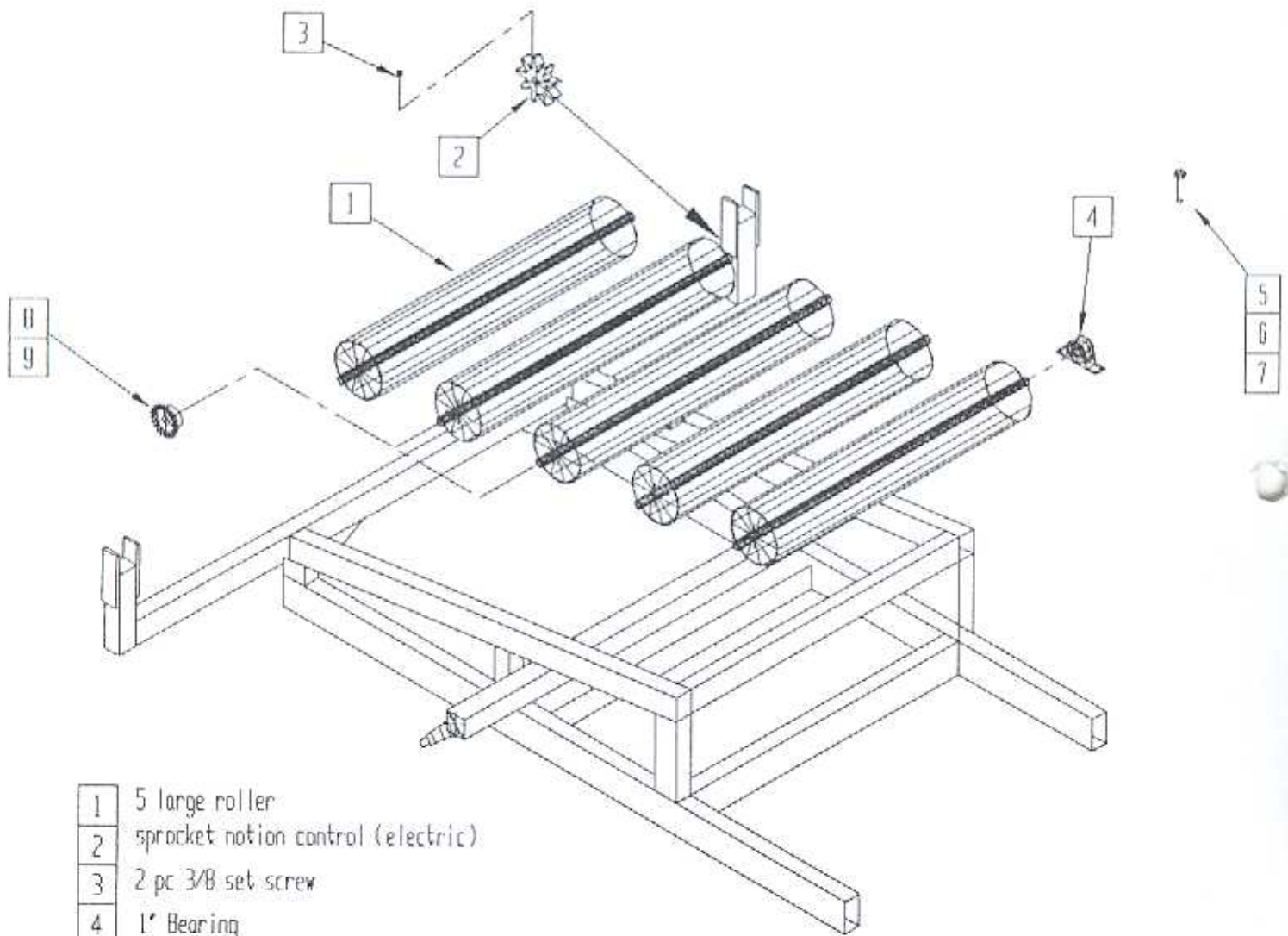
Tube - Line 550
Brakes



1	Rocker Tube
2	2 pc brake 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

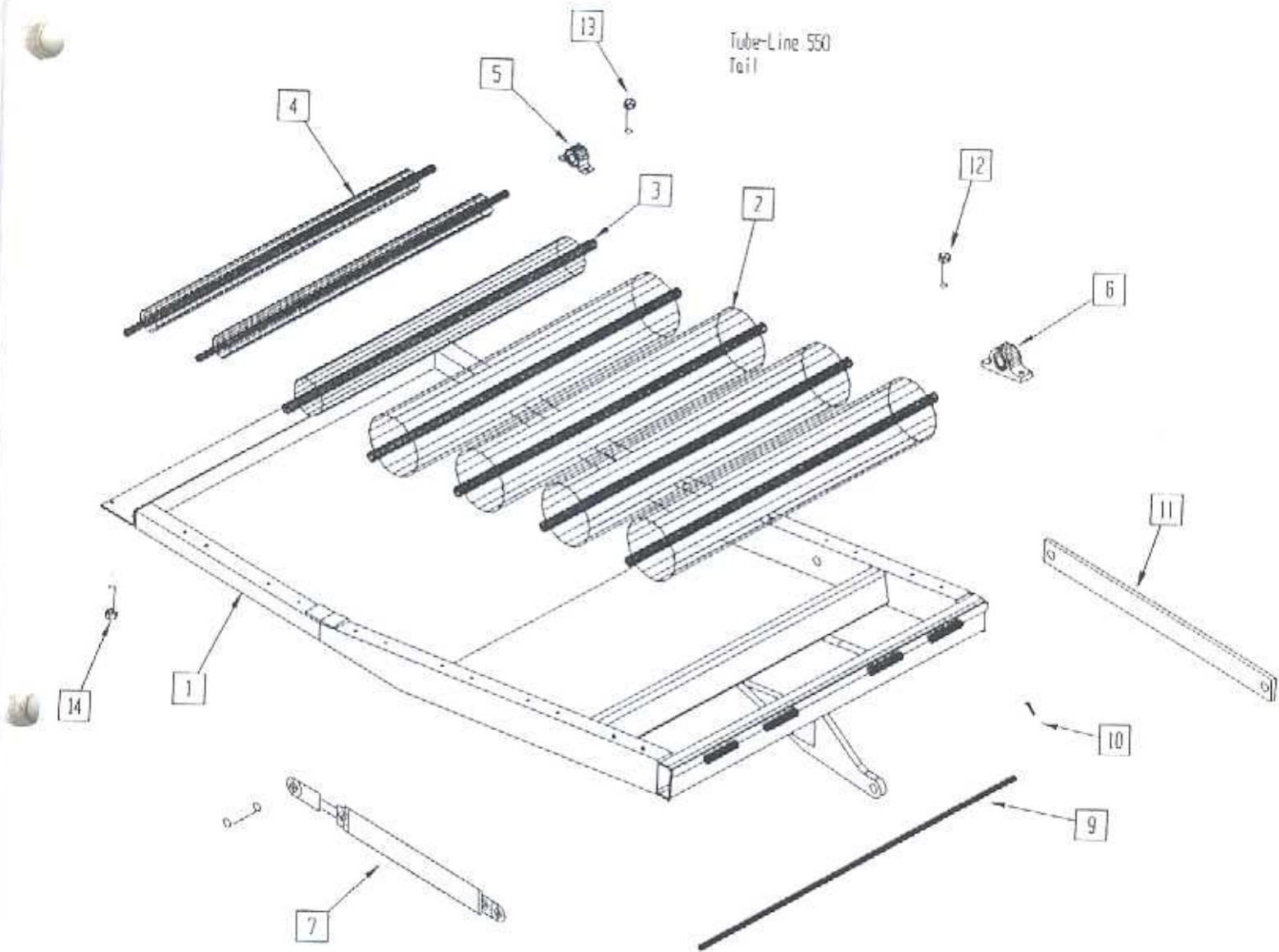
Tube-Line 550

rear roller



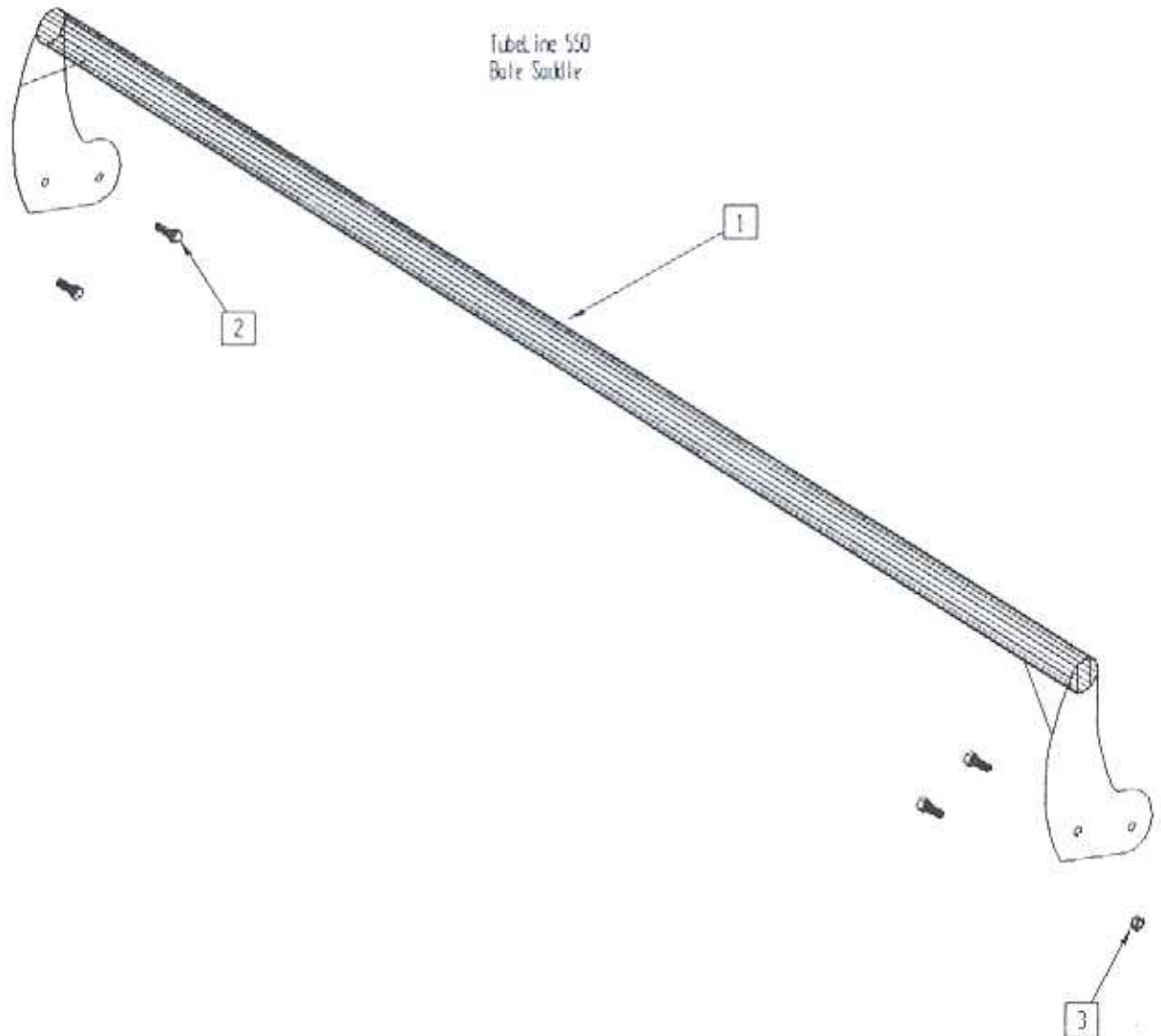
- | | |
|---|-------------------------------------|
| 1 | 5 large roller |
| 2 | sprocket motion control (electric) |
| 3 | 2 pc 3/8 set screw |
| 4 | 1" Bearing |
| 5 | 20 pc 3/8 x 1 3/4 Self tapping bolt |
| 6 | 20 pc 3/8 lockwasher |
| 7 | 20 pc 3/8 Flatwasher |
| 8 | 2 pc 40B20 Sprocket |
| 9 | #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

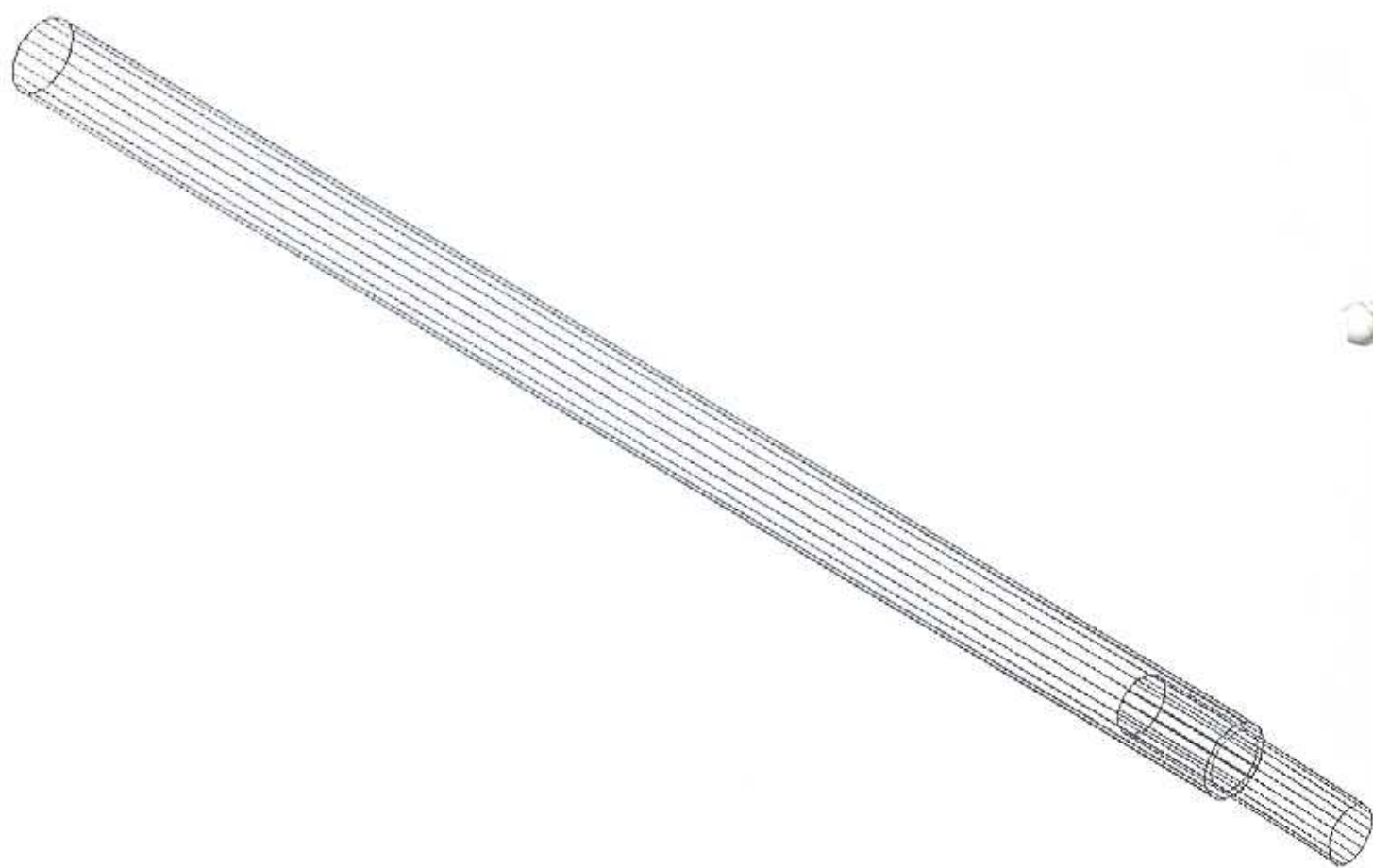
Tubeline 550
Bale Saddle



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

Tube-Line 550

Push tube



4

Tube - Line 550
push off channel

1

7 6 5

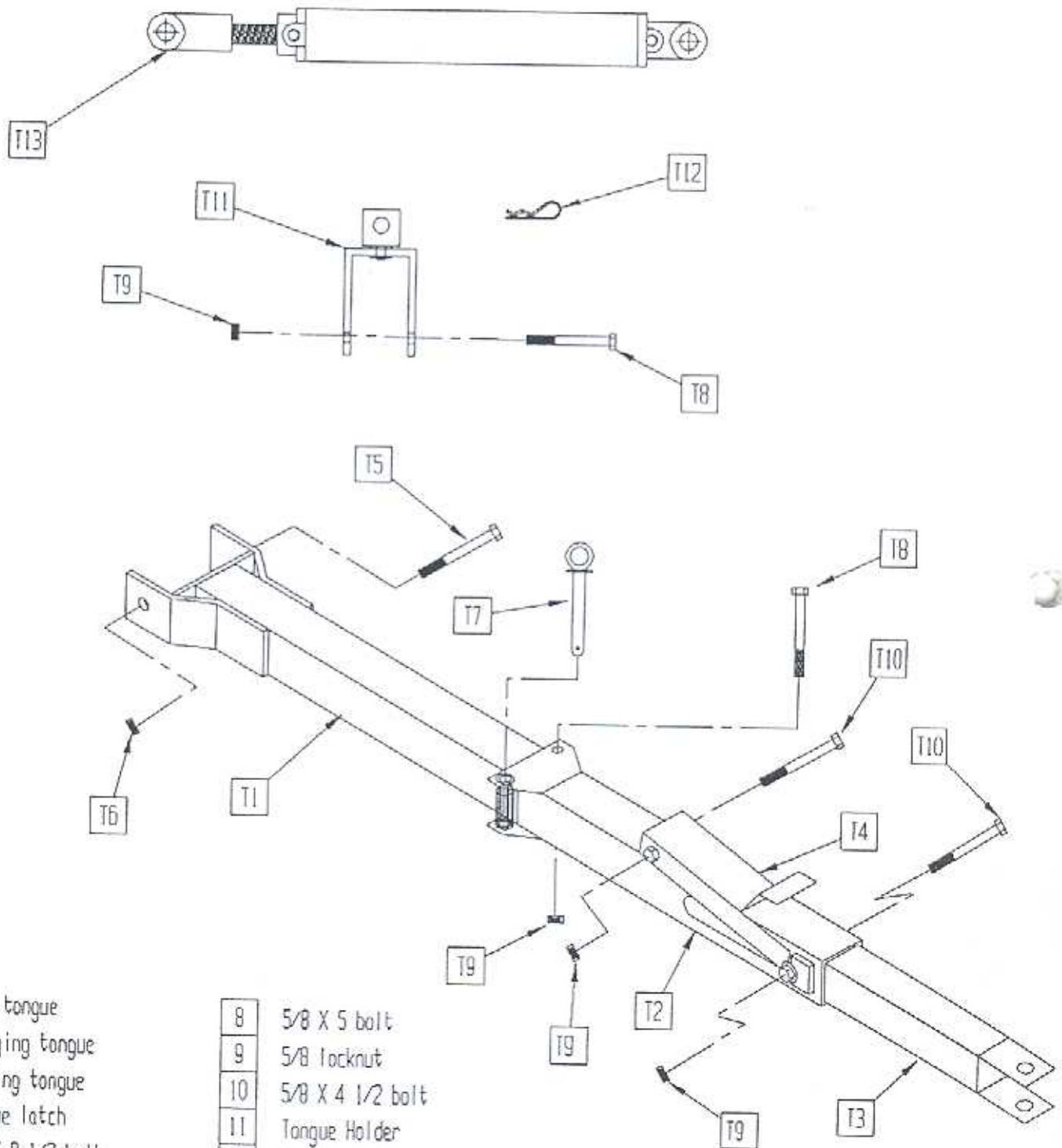
3

2

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



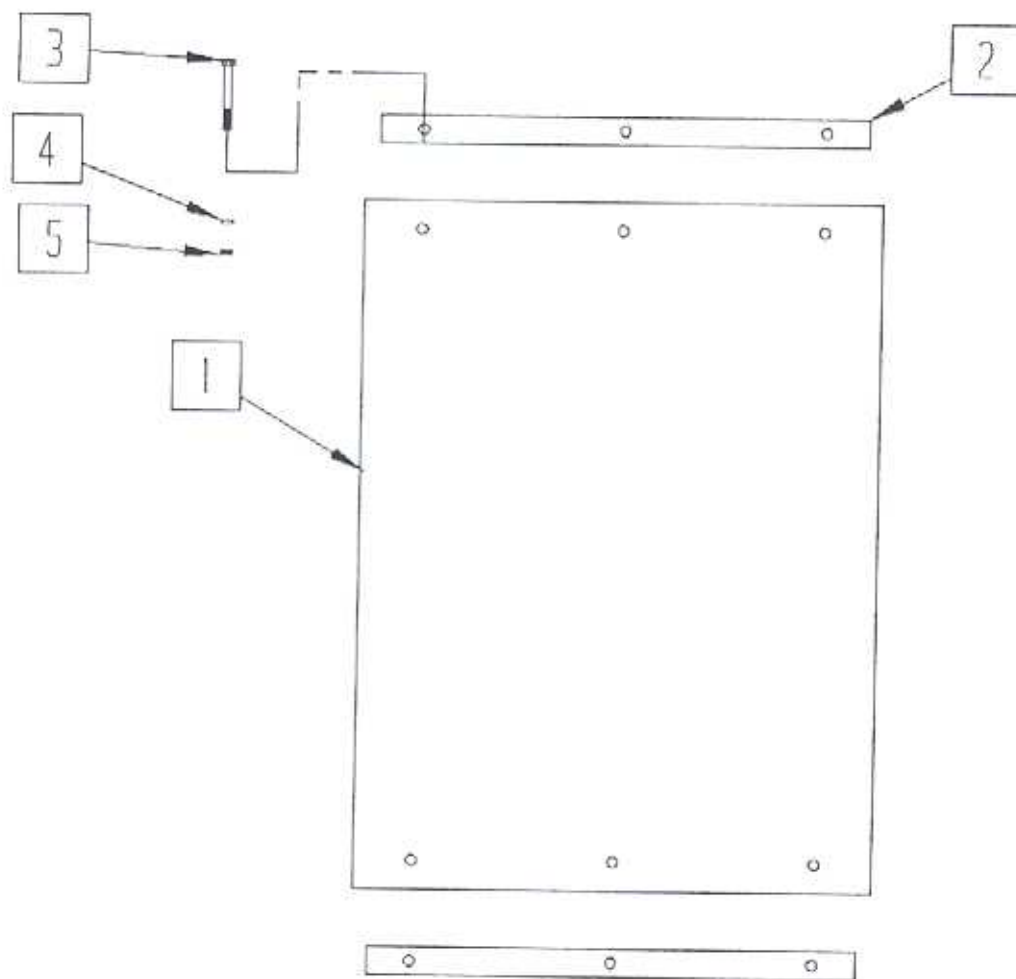
- | | |
|---|------------------|
| 1 | Main tongue |
| 2 | Swinging tongue |
| 3 | Sliding tongue |
| 4 | Tongue latch |
| 5 | 3/4 X 8 1/2 bolt |
| 6 | 3/4 locknut |
| 7 | Tongue pin |

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

T5FT2

Tube-Line 550

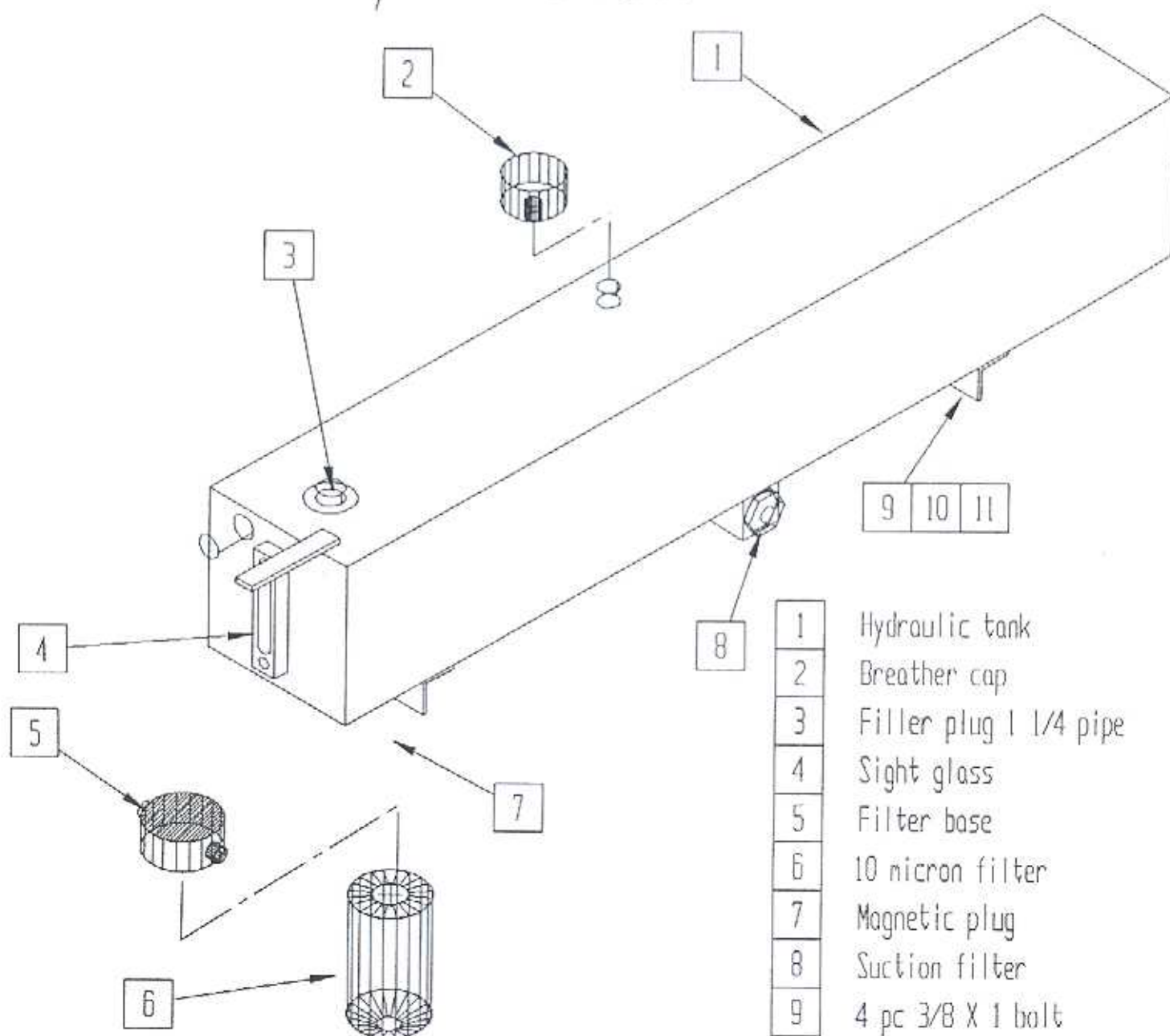
Mud Flap



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

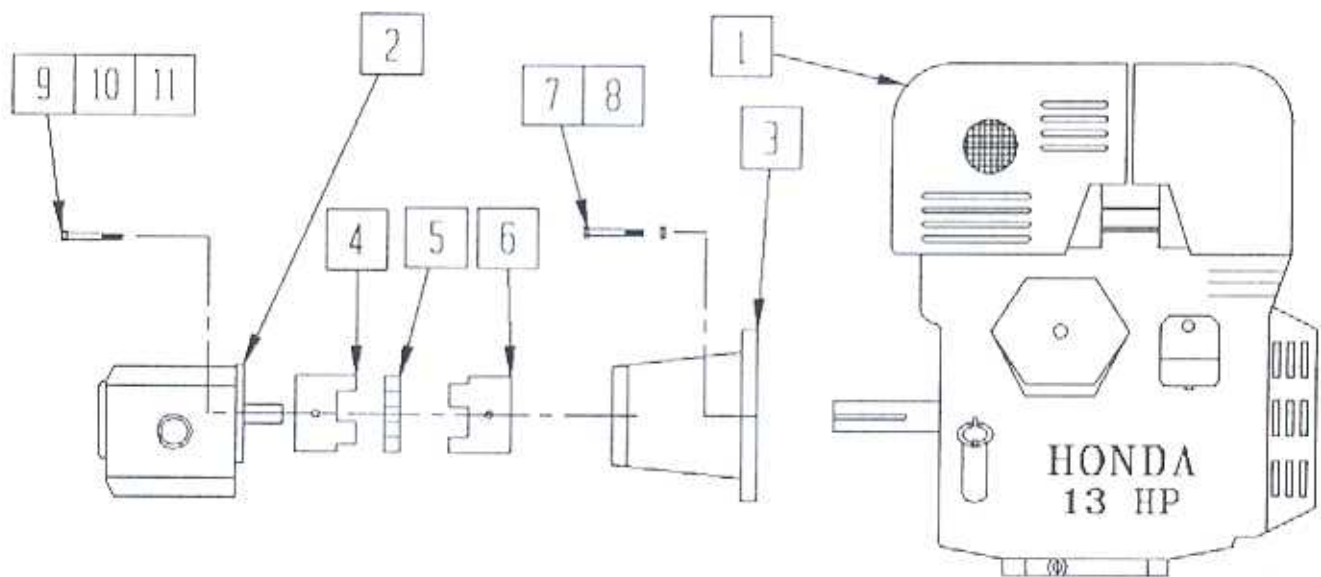
Tube-Line 550

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 550

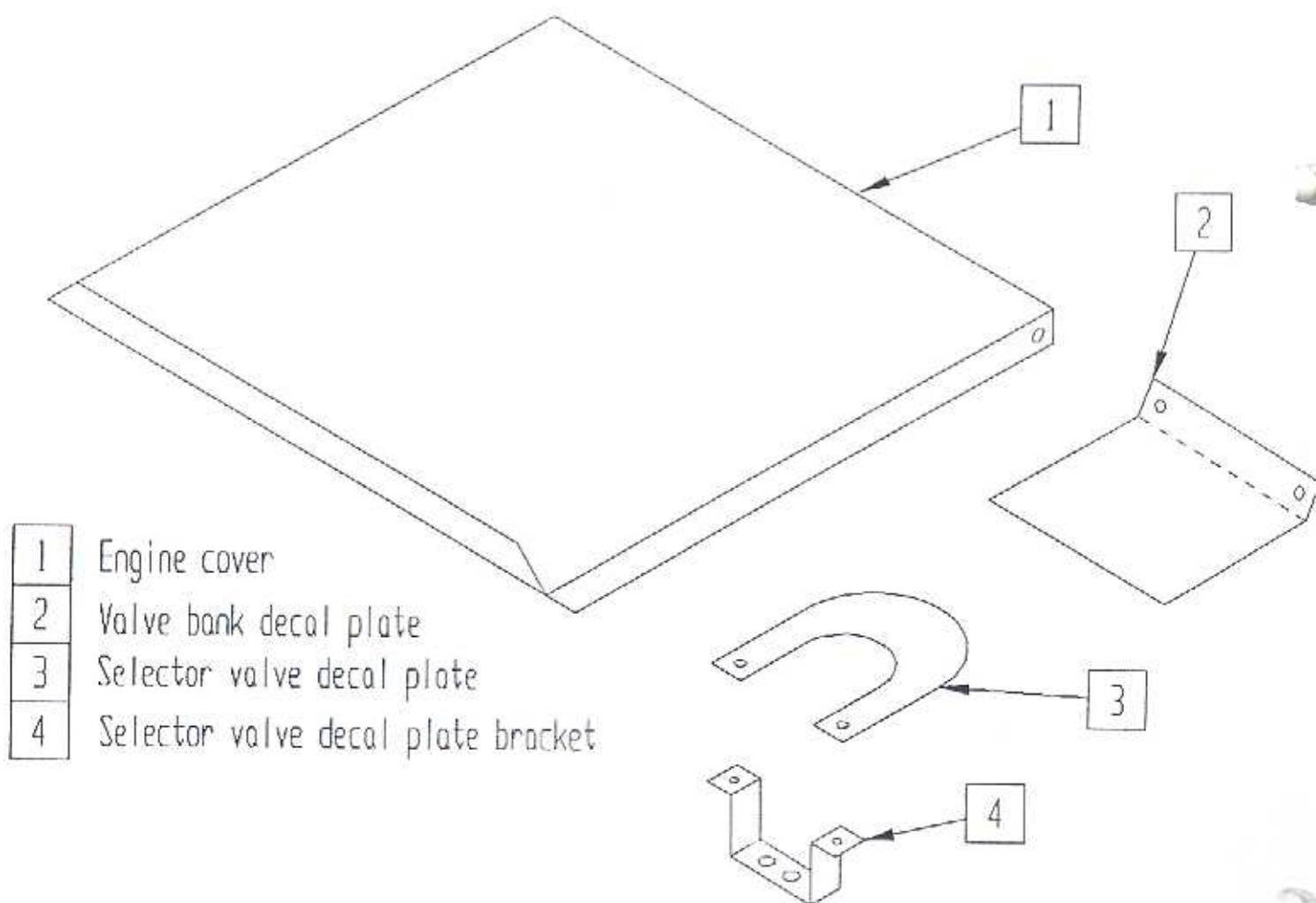


1	13 Hp HONDA Engine
2	Hydraulic Pump
3	Engine to pump adaptor
4	Love Joy Coupling
5	Coupling spacer
6	Love Joy Coupling engine

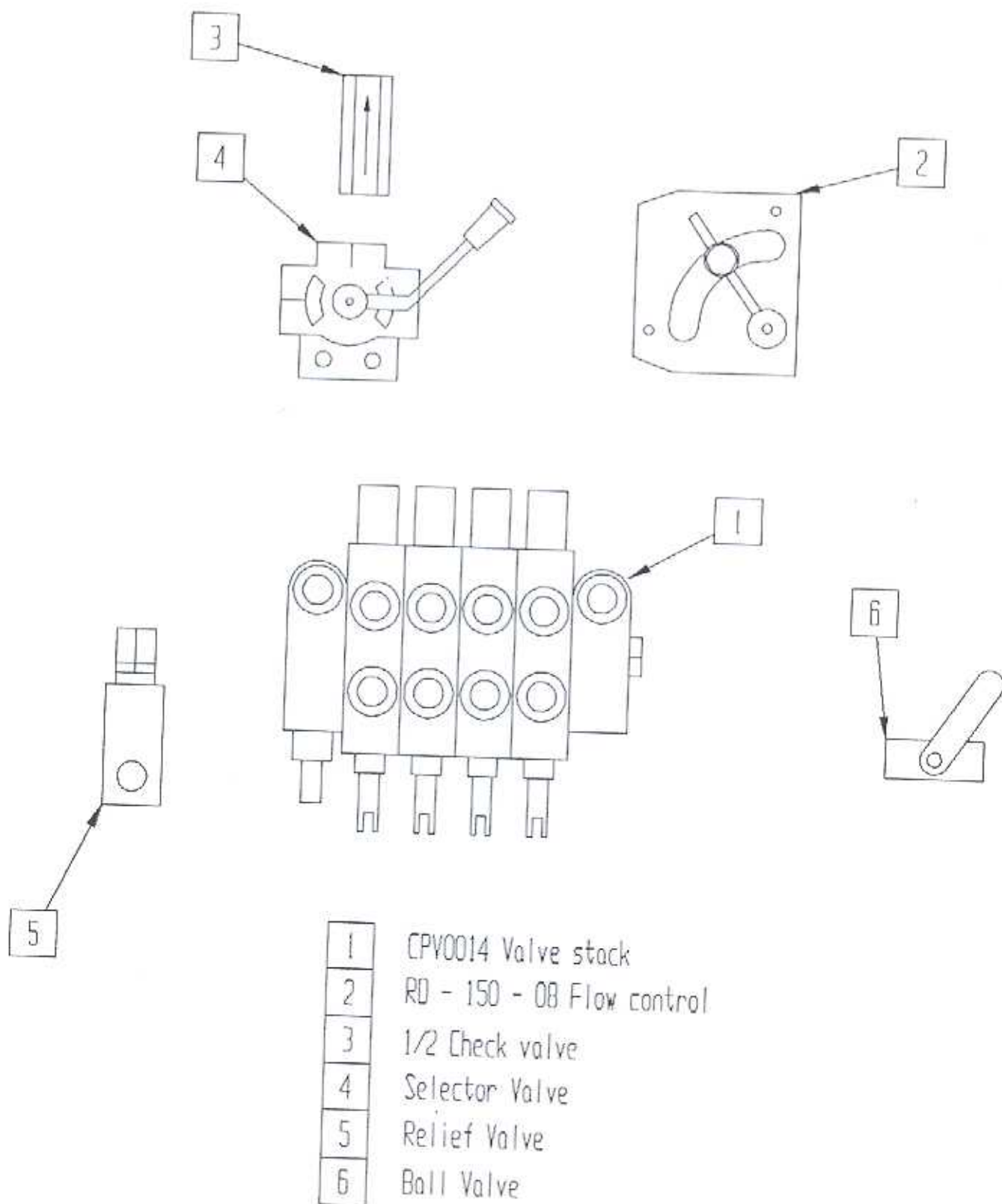
7	4 pc 3/8 X 1 bolt
8	4 pc 3/8 lockwasher
9	2 pc 3/8 1 1/4 bolt
10	2 pc 3/8 lockwasher
11	2 pc 3/8 flatwasher

Tube-Line 550

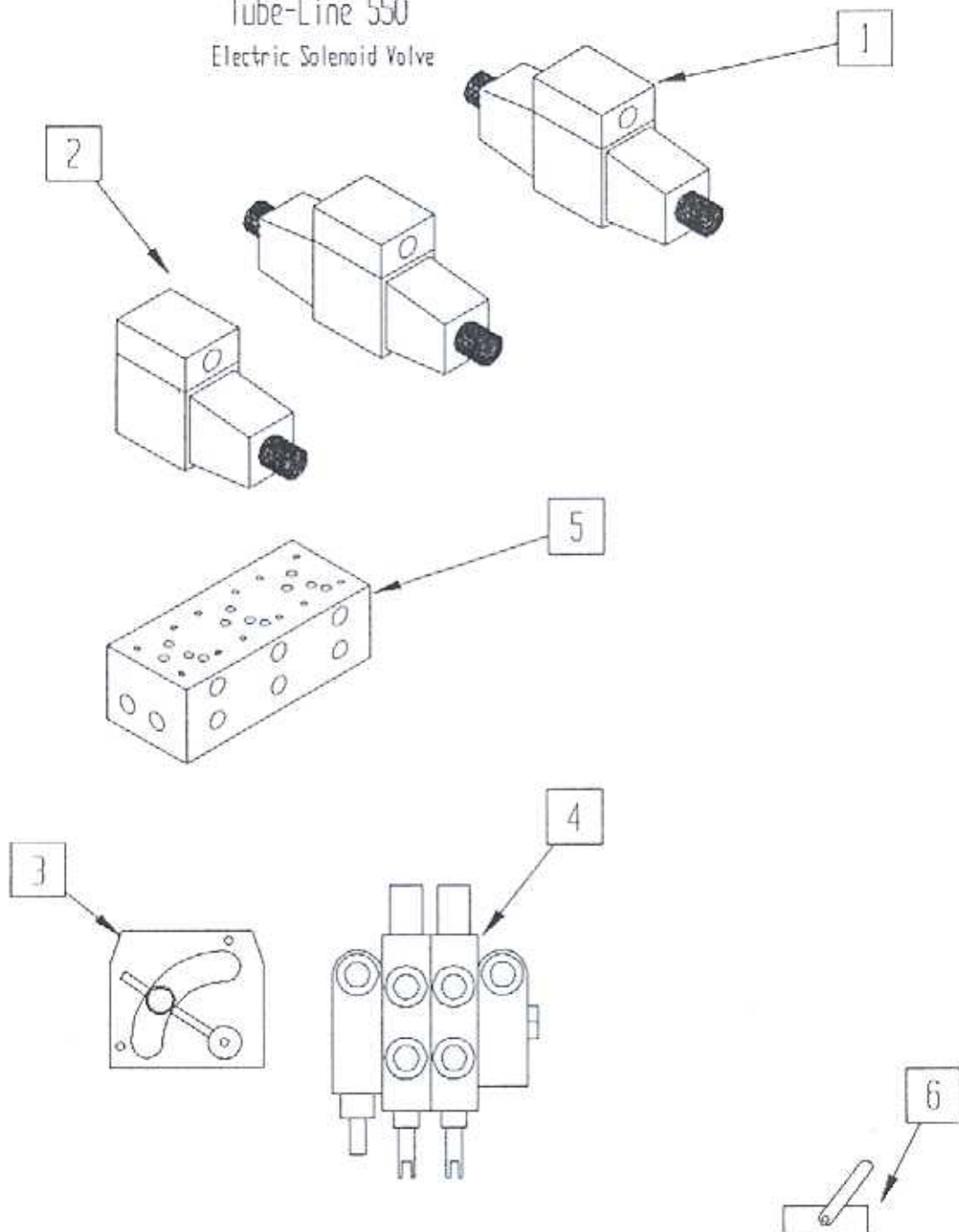
Engine cover & decal plate



Tube-Line 550
Manual valve bank



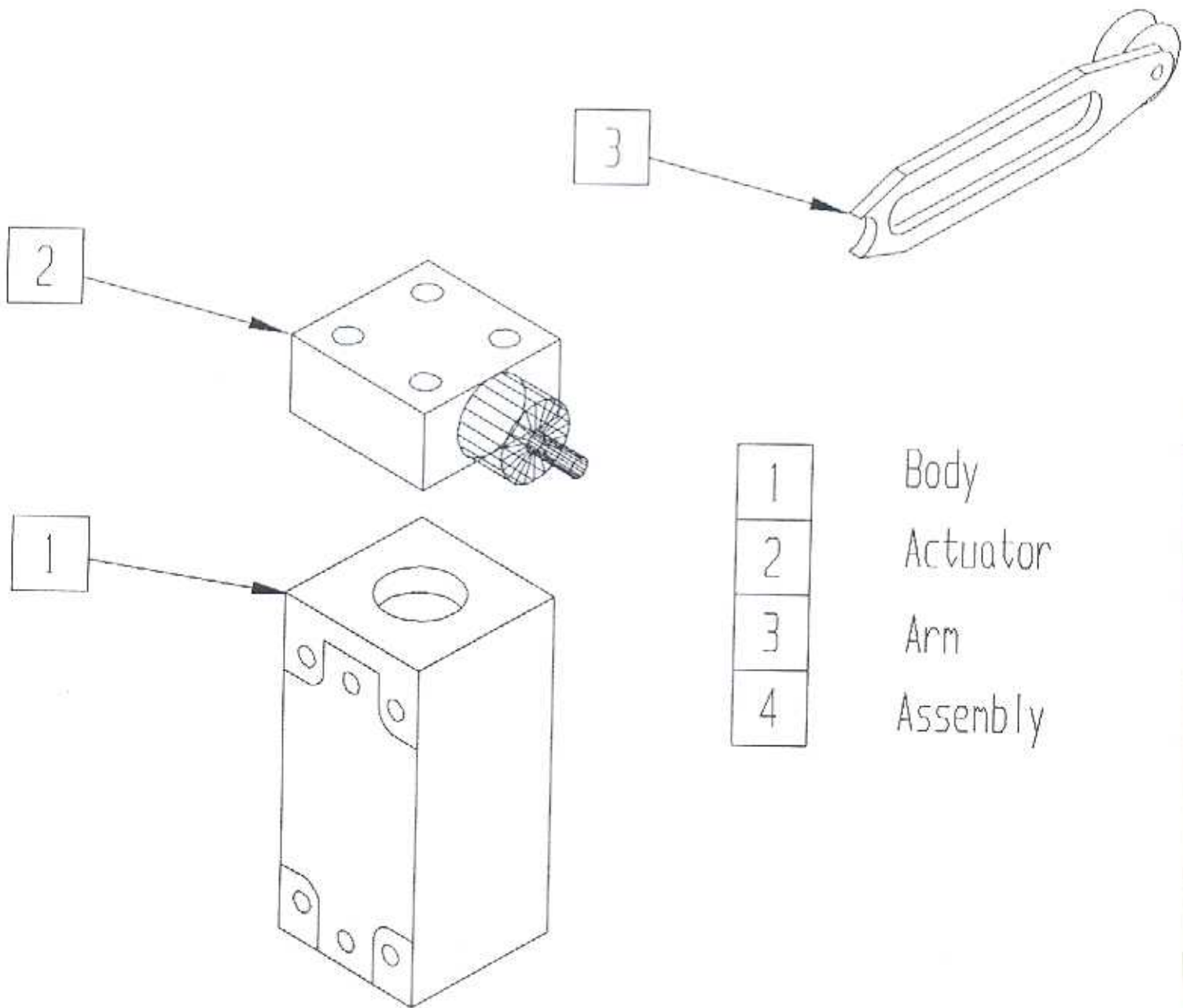
Tube-Line 550
Electric Solenoid Valve



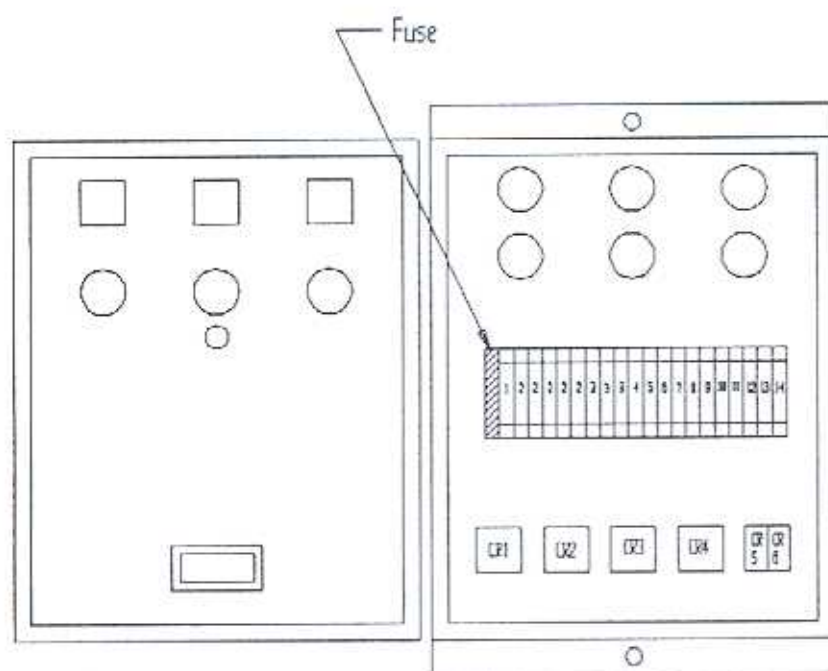
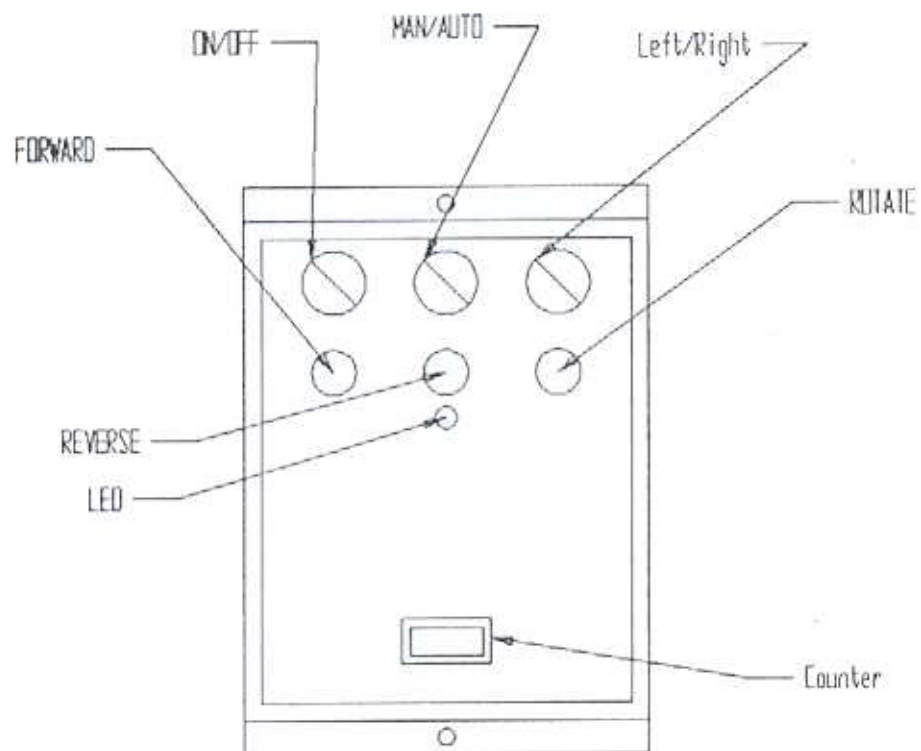
- | | |
|---|--|
| 1 | 2 pc VS12M3LGB75L tandem center 12 vdc |
| 2 | VS12M1AGB75L single sol 12 vdc |
| 3 | RD - 150 - 08 Flow control |
| 4 | 2 spool nonblock valve |
| 5 | Triple manifold |
| 6 | Ball Valve |

Tube-Line 550

Limit Switch

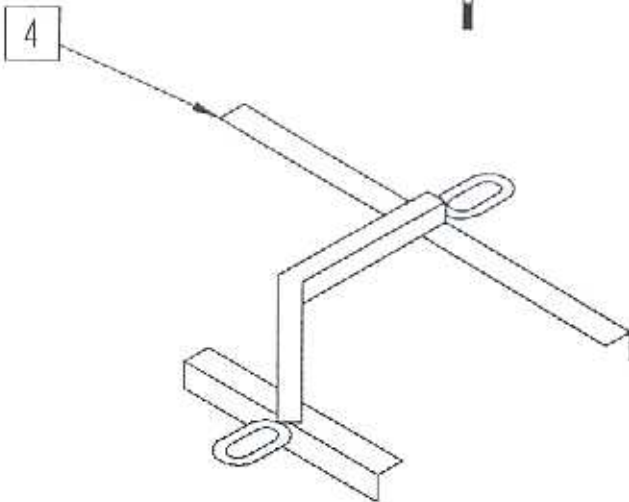
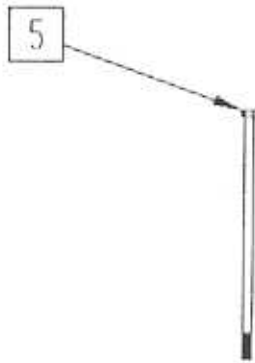
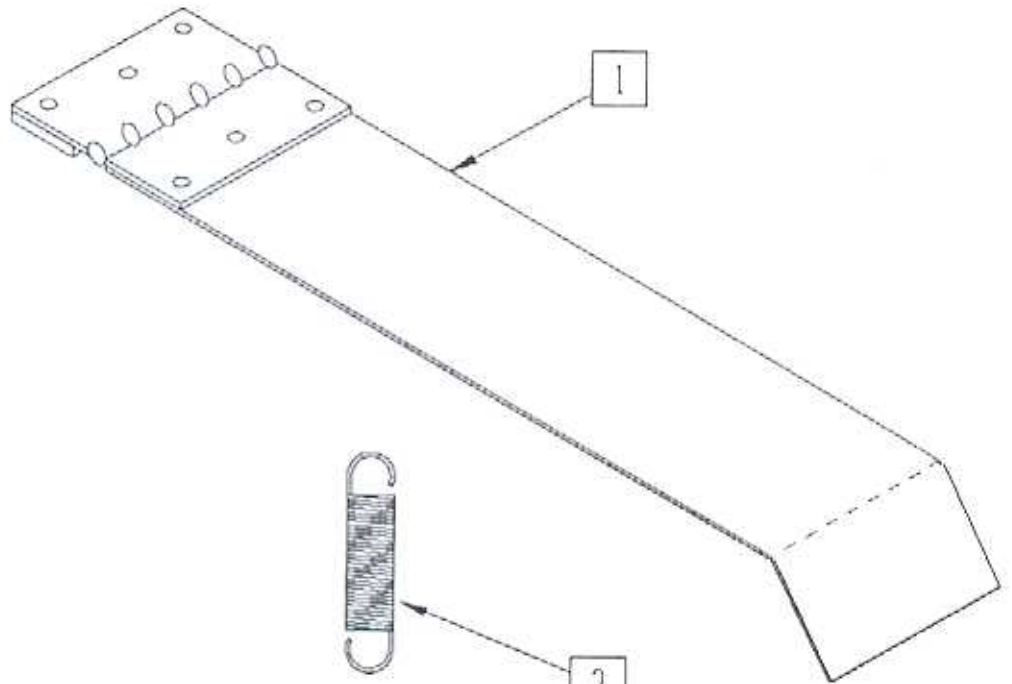
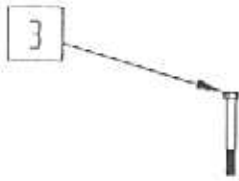


Tube-Line 550 Control Panel



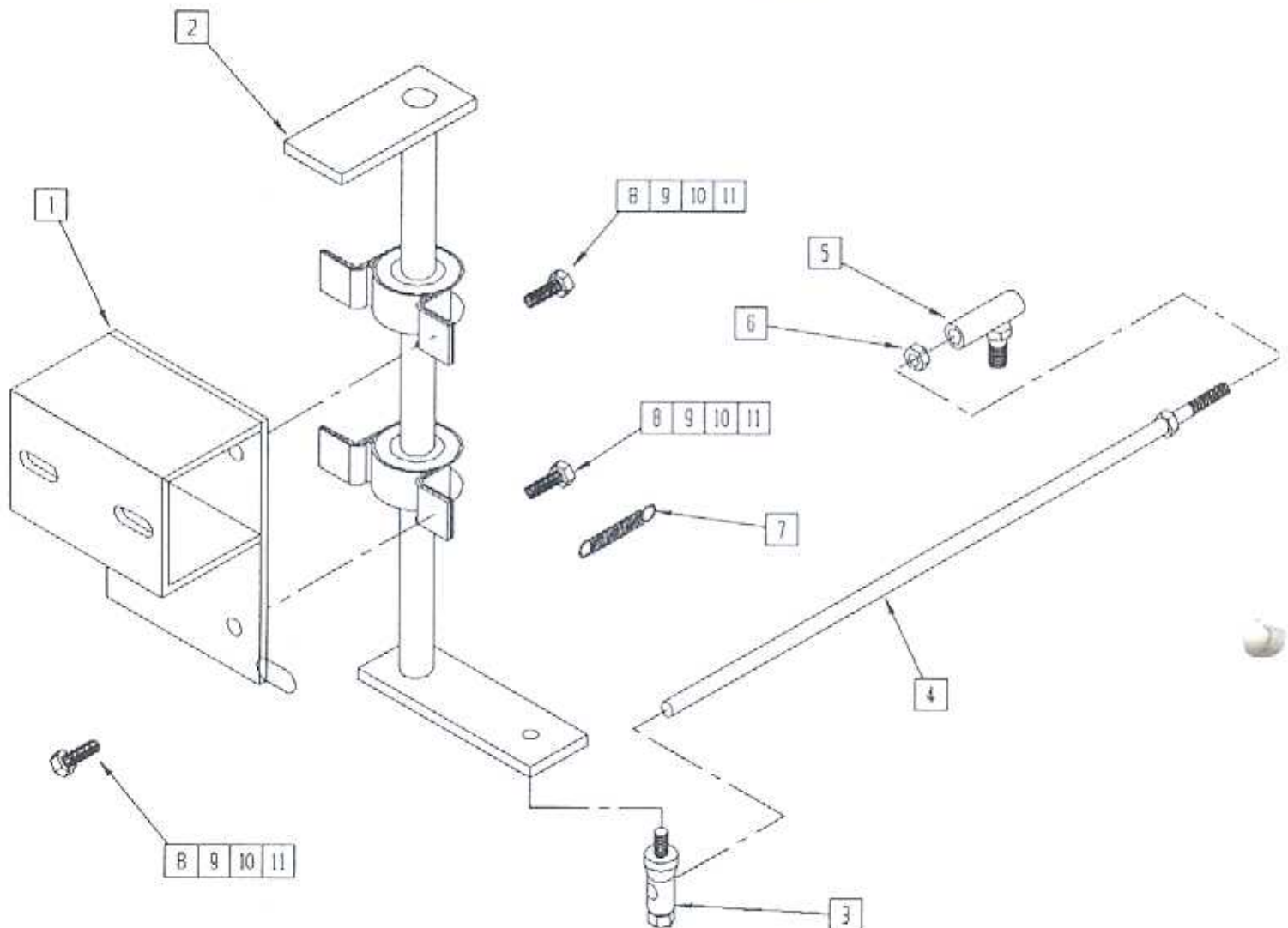
Tube-Line 550

Trigger & Battery hold down



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

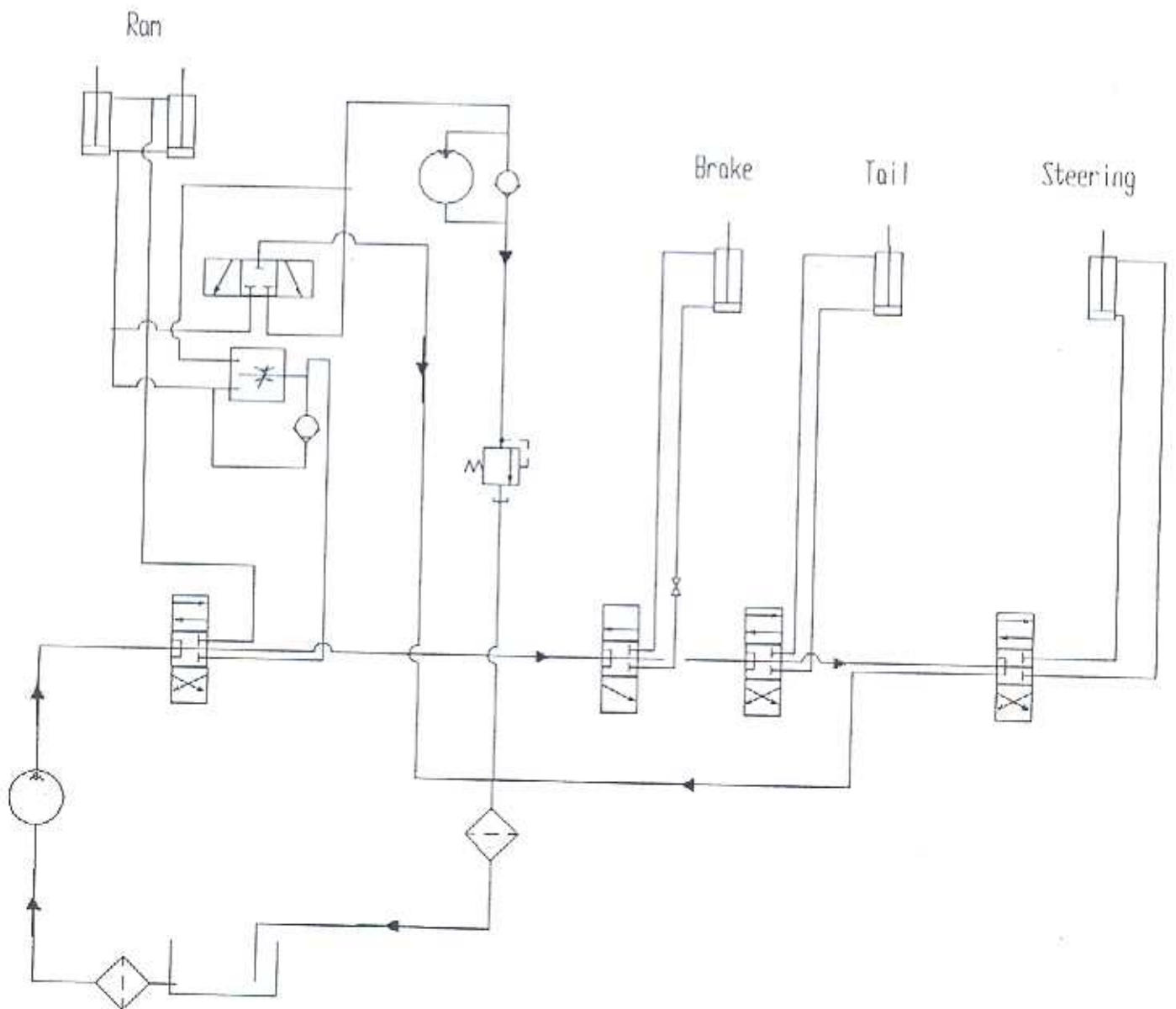
TubeLine 550
Throttle Bracket



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

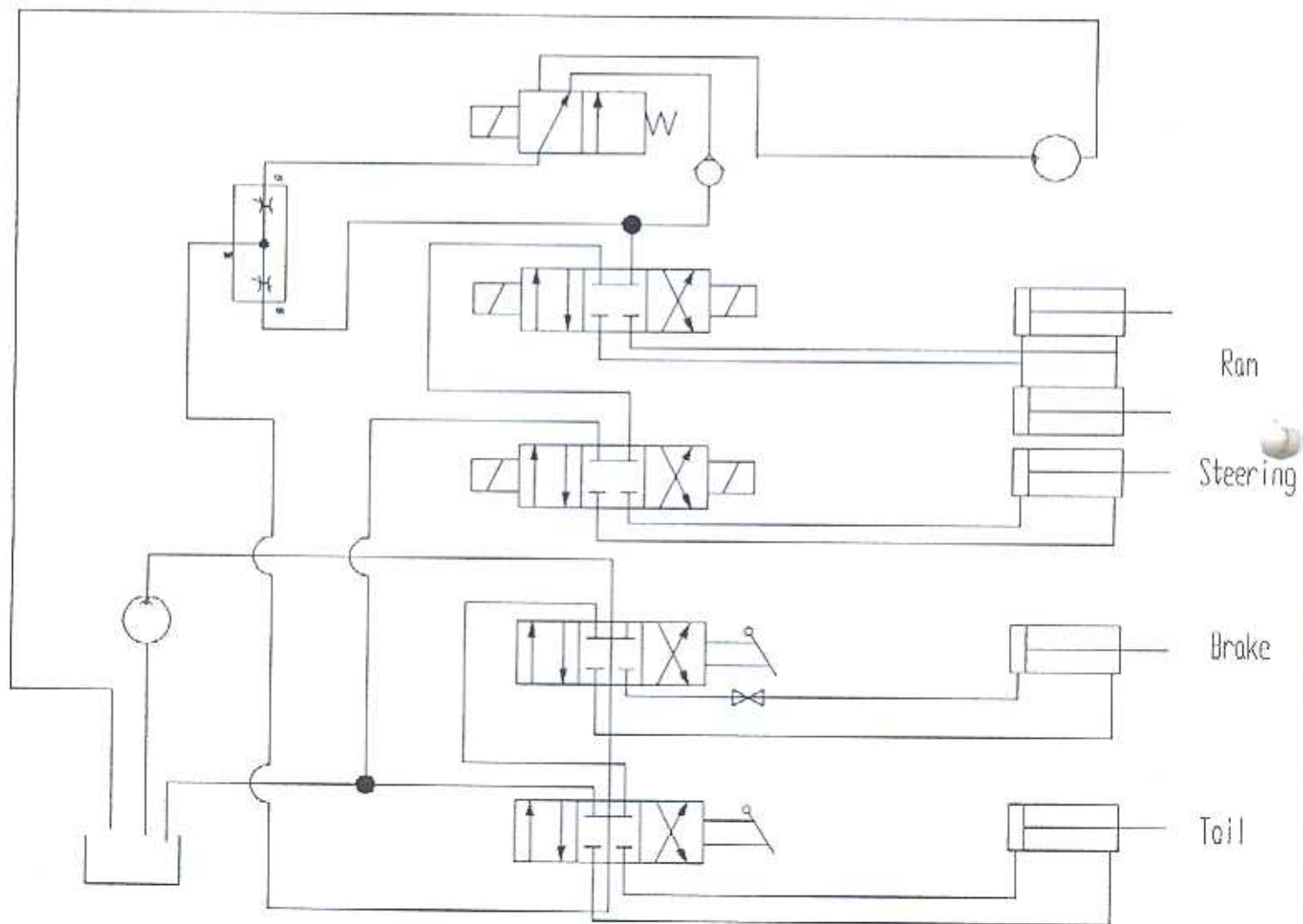
Tube-Line 550

Manual Hydraulic Schematic

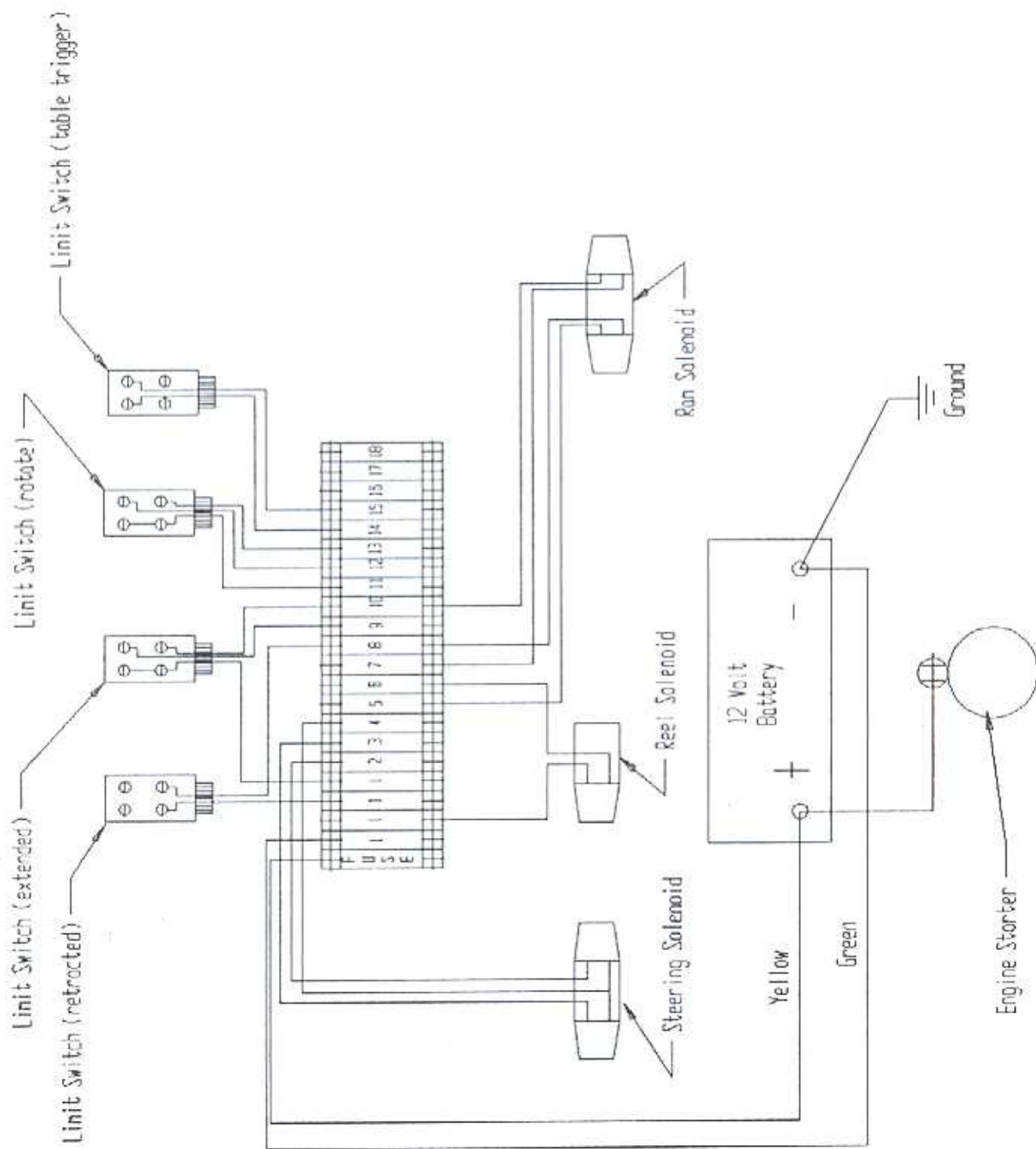


TubeLine 550

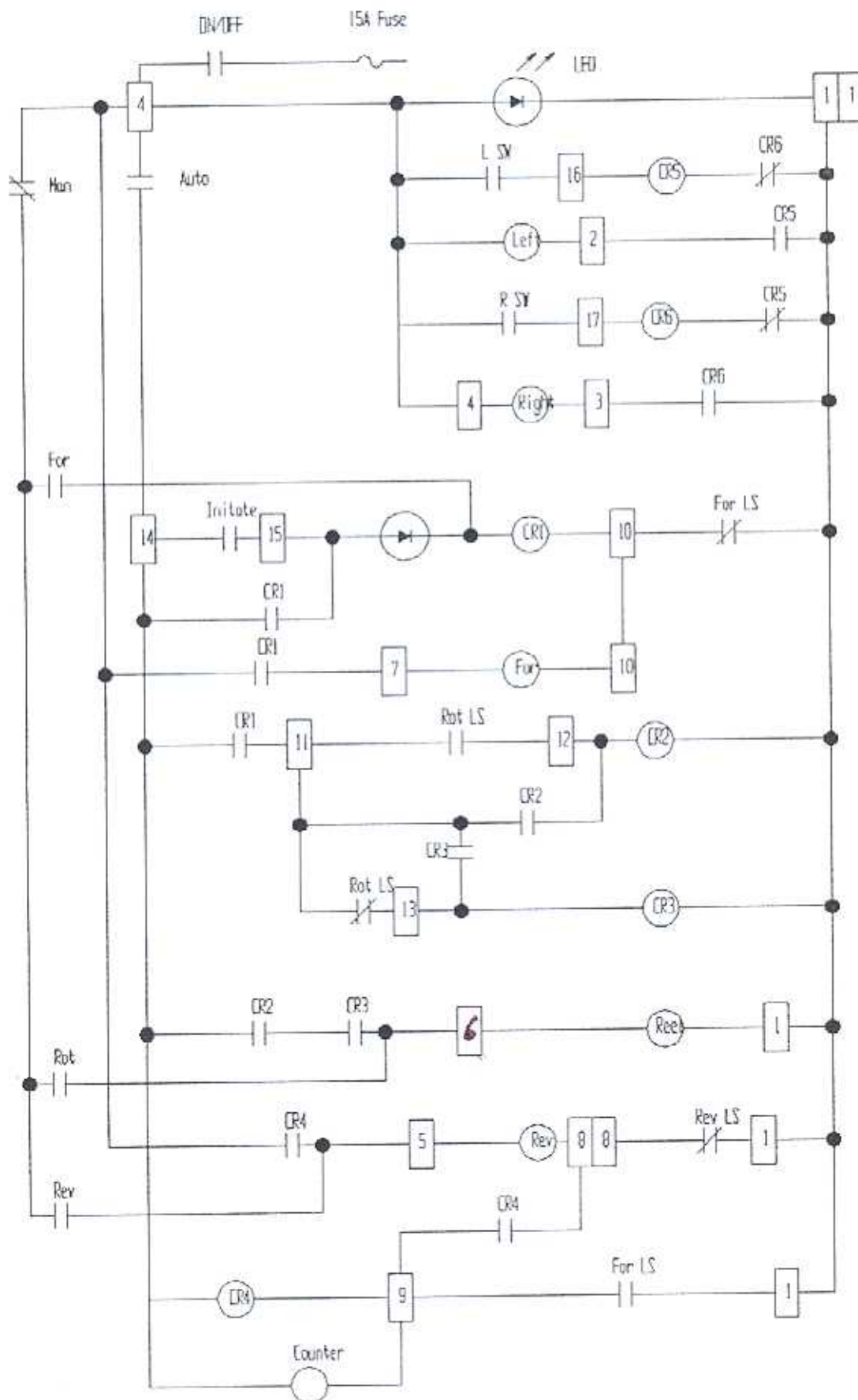
Electric Hydraulic Schematic



Tube - Line 550 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
1	2	550-100-002	1	Hoop Inner Ring
1	3	550-100-003	4	Mounting Bolt 1/2 x 2
1	4	500-100-076	4	1/2 Nut
1	5	500-100-075	5	1/2 Lockwasher
2	2	500-100-014	8	4 in Wheel
2	3	500-100-015	8	Axle Bolt
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
3	2	550-100-005	4	1-14 UNF Locknut
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
3	8	550-100-011	2	Spool Holder
3	9	550-100-012	4	Wrap Spool
3	10	550-100-013	8	Washer
3	11	500-100-014	4	Locknut
3	12	550-100-015	4	Oilite Bushing
3	13	500-100-022	2	Plastic Pipe
3	14	500-100-021	4	Plastic Bearing
3	15	550-100-016	4	Bracket
3	16	550-100-017	4	Spacer
3	17	500-100-135	4	Spring
3	18	550-100-018	2	Axle Plastic Roller
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
3	22	550-100-021	2	Grease Fitting
4	1	550-100-022 R	1	Right Side Safety Door Bracket
4	1	550-100-023 L	1	Left Side Safety Door Bracket
4	2	550-100-024 R	1	Right Safety Door
4	2	550-100-025 L	1	Left Safety Door
4	3	500-100-041	2	Rubber Latch
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

page #	Ref #	Part #	Qty	Description
5	1	500-100-049	1	Drive Wheel Base
5	2	500-100-050	1	Hydraulic Motor EATON Char-Lynn 101-1004
5	3	500-100-051	1	Motor Hub
5	4	500-100-052	1	Drive Wheel
5	5	500-100-053	4	1/2 x 3 UNF Bolt
5	6	500-100-054	4	1/2 Wheel Nut
5	7	500-100-055	2	5/8 x 1 1/2 Bolt
5	8	500-100-056	2	5/8 Locknut
5	9	500-100-057	4	3/8 x 3/4 Bolt
5	10	500-100-038	4	3/8 Lockwasher
5	11	500-100-059	1	Check Valve (manual model only)
5	12	500-100-060	1	Washer
5	13	500-100-081	1	1/4 x 1 Bolt / Lockwasher
5	14	500-101-222	1	Relief Valve (manual model only)
5	15	500-101-231	1	Wheel Tensioner Spring
5	16	500-101-232	1	Spring Tensioner Bolt
6	2	500-100-063	2	Inner Seal
6	3	500-100-064	2	Inner Bearing
6	4	500-100-065	2	Inner Bearing Race
6	5	500-100-066	2	Hub
6	6	500-100-067	2	Outer Bearing Race
6	7	500-100-068	2	Outer Bearing
6	8	500-100-069	2	Flat Washer
6	9	500-100-070	2	Castellated Nut
6	10	500-100-071	2	Cotter Pin
6	11	500-100-072	10	Wheel Stud
6	12	500-100-073	2	Dust Cap
7	1	550-100-028	1	Brake Rocker Tube
7	2	550-100-029	2	Brake Eccentric
7	3	500-100-113	2	1/2 x 3 1/2 Bolt
7	4	500-100-075	2	1/2 Lockwasher
7	5	500-100-076	2	1/2 Nut
7	6	500-100-103	1	2 x 16 Hydraulic Cylinder
8	1	500-100-086	5	Large Roller
8	2	500-100-087	1	Sprocket Motion Sensor (electric)
8	3	500-100-088	2	Set Screw
8	4	550-100-030	10	1 in Bearing
8	5	550-100-031	20	3/8 x 1 3/4 Self Tapping Bolt
8	6	500-100-038	20	3/8 Lockwasher
8	7	500-100-190	20	3/8 Flatwasher
8	8	500-100-222	2	40B20 Sprocket
8	9	550-100-032	1	# 40 Roller Chain

page #	Ref #	Part #	Qty	Description
9	1	550-100-033	1	Tail Base
9	2	500-100-086	4	Large Roller
9	3	500-100-099	1	4 in Roller
9	4	500-100-100	2	2 3/8 Roller
9	5	550-100-034	4	3/4 Pressed Steel Pillow Block Bearing
9	6	550-100-030	10	1 in Bearing
9	7	500-100-103	1	2 x 16 Hydraulic Cylinder
9	8	500-100-109	1	Hinge Pin
9	9	500-100-110	1	Cotter Pin
9	10	550-100-035	1	Tail Tie Bar
9	11	550-100-031	16	3/8 x 1 3/4 Self Tapping Bolt
9	12	550-100-036	4	5/16 x 1 Self Tapping Bolt
9	13	550-100-037	4	5/16 x 1 1/2 Flathead Bolt
10	1	550-100-038 R	1	Bale Saddle right side
10	1	550-100-039 L	1	Bale Saddle left side
10	2	500-100-125	8	1/2 x 1 1/4 Bolt
10	3	500-100-114	4	1/2 Locknut
10	4	500-100-076	4	1/2 Nut
10	4	500-100-075	4	1/2 Lockwasher
11	1	550-100-040	1	Ram
11	2	550-100-041	2	Ram Guide
11	3	550-100-042	4	Cylinder Pin
11	4	550-100-043	2	Hydraulic Cylinder
11	5	550-100-044	2	3/4 x 2 Bolt
11	6	550-100-045	2	3/4 Lockwasher
11	7	550-100-046	2	3/4 Flatwasher
11	8	500-101-137	1	Push Plate
11	9	500-100-139	2	1/2 x 4 Bolt
11	10	500-100-076	2	1/2 Nut
11	11	500-100-075	2	1/2 Lockwasher
11	12	500-100-145	2	Grease Fitting
11	13	500-101-114	2	Push Plate Pin
12	1	550-100-046	1	Push Tube
13	1	550-100-047	2	Push Channel
13	2	550-100-048	1	Push off Tube
13	3	550-100-049	2	Tube Holder
13	4	550-100-050	3	Lock Pin
13	5	500-100-176	4	3/8 x 1 Bolt
13	6	500-100-039	4	3/8 Nut
13	7	500-100-038	4	3/8 Lockwasher

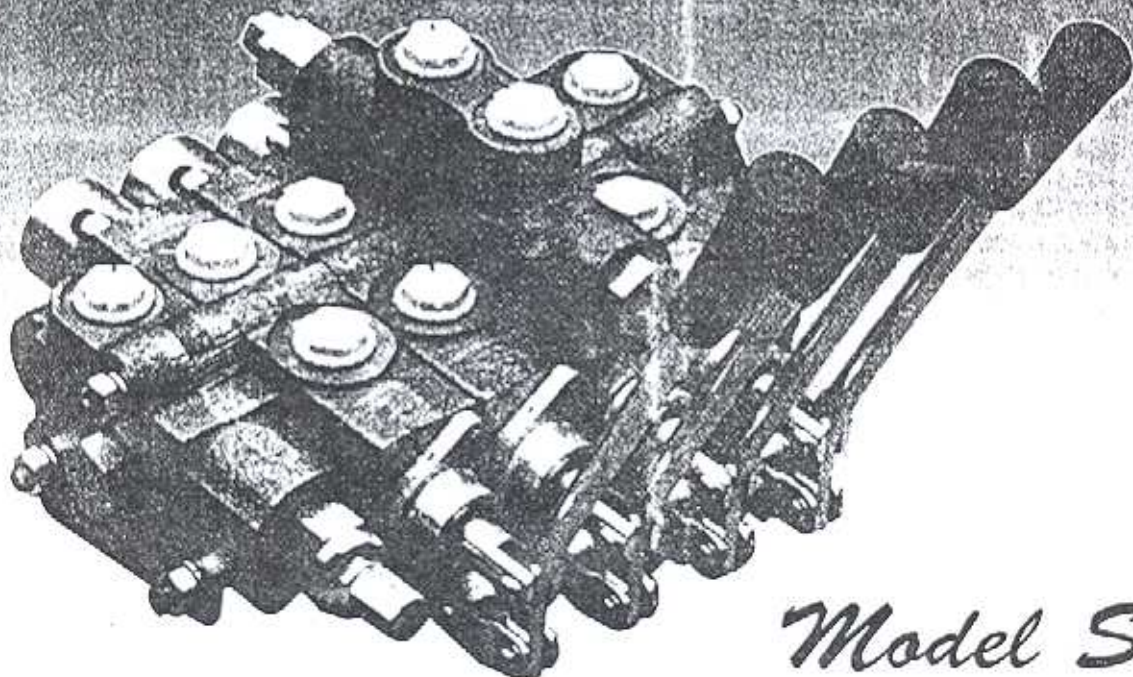
page #	Ref #	Part #	Qty	Description
14	1	550-100-051	1	Main Tongue
14	2	550-100-052	1	Swinging Tongue
14	3	550-100-053	1	Sliding Tongue
14	4	500-100-151	1	Tongue Latch
14	5	500-100-152	1	3/4 X 8 1/2 Bolt
14	6	500-100-153	1	3/4 Locknut
14	7	500-100-154	1	Tongue Pin
14	8	500-100-155	2	5/8 X 5 Bolt
14	9	500-100-156	4	5/8 Locknut
14	10	500-100-157	2	5/8 x 4 1/2 Bolt
14	11	500-100-160	1	Tongue Holder
14	12	500-100-112	1	Hair Pin
14	13	500-100-103	1	2 x 16 Hydraulic Cylinder
15	1	550-100-054	2	Mud Flap
15	2	500-100-164	4	Metal Strip
15	3	500-100-165	12	5/16 x 1 Bolt
15	4	500-100-092	12	5/16 Lockwasher
15	5	500-100-093	12	5/16 Nut
16	1	500-100-168	1	Hydraulic Tank
16	2	500-100-169	1	Breather Cap
16	3	500-100-170	1	Filler Plug 1 1/4 Pipe
16	4	500-100-171	1	Sight Gauge
16	5	500-100-172	1	Filter Base
16	6	500-100-173	1	10 Micron Filter
16	7	500-100-174	1	Magnetic Drain Plug
16	8	500-100-175	1	Suction Filter
16	9	500-100-176	4	3/8 x 1 Bolt
16	10	500-100-038	4	3/8 Lockwasher
16	11	500-100-039	4	3/8 Nut
17	1	500-100-179	1	13 HP Honda Engine (rope start QA)
17	1	500-100-180	1	" " (electric start QNE)
17	2	500-100-181	1	Hydraulic Pump Prince # SP20A11A9HR
17	3	500-100-182	1	Engine - Pump Adaptor
17	4	500-100-183	1	Love Joy Coupling engine side
17	5	500-100-184	1	Coupling Spacer
17	6	500-100-185	1	Love Joy Coupling pump side
17	7	500-100-176	4	3/8 x 1 Bolt
17	8	500-100-038	4	3/8 Lockwasher
17	9	500-100-188	2	3/8 x 1 1/4 Bolt
17	10	500-100-038	2	3/8 Lockwasher
17	11	500-100-190	2	3/8 Flatwasher
18	1	500-100-196	1	Engine Cover
18	2	500-100-197	1	Valve Stack Decal Plate
18	3	500-100-198	1	Selector Valve Decal Plate
18	4	500-100-199	1	Selector Valve Decal Plate Bracket

page #	Ref #	Part #	Qty	Description
19	1	500-100-192	1	Prince # CPV0014
19	2	500-100-193	1	Flow Control Prince RD-150-08
19	3	500-100-194	1	1/2 Check Valve
19	4	500-100-195	1	Selector Valve
19	5	500-101-226	1	Relief Valve Prince RD18375
19	6	500-101-227	1	Ball Valve
20	1	500-100-200	2	Continental Tandem Center 12 VDC VS12MBLGB75L
20	2	500-100-201	1	Continental Single Center 12 VDC VS12M1AGB75L
20	3	500-100-193	1	Flow Control Prince RD-150-08
20	4	550-100-055	1	2 Spool Monoblock Valve c/w power beyond
20	5	550-100-056	1	Triple Manifold Block
20	6	500-100-227	1	Ball Valve
21	1	550-100-057	1	Limit Switch Body
21	2	550-100-058	1	Limit Switch Actuator
21	3	550-100-059	1	Limit Switch Arm
21	4	550-100-060	1	Limit Switch Assembly
22	1	550-100-061	1	Control Panel
23	1	500-100-208	1	Trigger Plate
23	2	550-100-062	1	Trigger Spring
23	3	500-100-210	2	1/4 x 1 Stove Bolt c/w nut lockwasher
23	4	500-100-211	1	Battery Holdown
23	5	500-100-212	2	5/16 x 7 Bolt c/w nut lockwasher
24	1	550-100-063	1	Throttle Mount Bracket
24	2	550-100-064	1	Throttle Arm
24	3	550-100-065	1	Link Pivot
24	4	550-100-066	1	Throttle Link
24	5	550-100-067	1	Ball Joint
24	6	550-100-068	1	1/4 - 28 UNF Nut
24	7	550-100-069	1	Throttle Spring
24	8	500-100-165	6	5/16 x 1 Bolt
24	9	500-100-093	6	5/16 nut
24	10	550-100-070	6	5/16 Flatwasher

Directional Control Valves



SECTIONAL BODY



Model SV

STANDARD FEATURES

- 1 - 10 Sections Per Valve Bank
- Load Checks On Each Section
- Hard Chrome Plated Spools
- Compact Construction
- Enhanced Metering Section Available in both the High and Low Sections
- Differential Poppet Style Relief, Adjustable from 1500 to 3000 psi (Also available in Low Pressure Version Adjustable from 500 to 1500 psi)
- Power Beyond Capability
- Reversible Handle
- Mid-Inlet and Lock Valve Section available

SPECIFICATIONS

Parallel or Series Circuit Construction

Pressure Rating

Maximum Operating Pressure3000 psi

Maximum Tank Pressure500 psi

Nominal Flow Rating12 GPM

Refer to Pressure Drop Curves.

Recommended Filtration10 Micron

Foot Mounting

Maximum Operating Temp.180°F

Weight Per Section

Inlet SectionApprox 3.75 lbs.

Outlet SectionApprox 3.75 lbs.

Work Section (Standard)Approx 5.50 lbs.

Work Section (High)Approx 8.00 lbs.

VALVE ASSEMBLIES

The SV Series sectional body directional control valve can be ordered as separate sections as outlined or as a complete factory tested assembly. This will need to be specified with each order. An assembly model number will be assigned at the time of the order. This assembly number can then be used for future orders.

ASSEMBLY MODEL NUMBER S V A - X X X

Sequence of Numbers: This number will be assigned to final valve to be assembled and tested at the factory. Each new order or quote will be assigned a new assembly model number.

FIELD CONVERSION AND REPAIR KITS

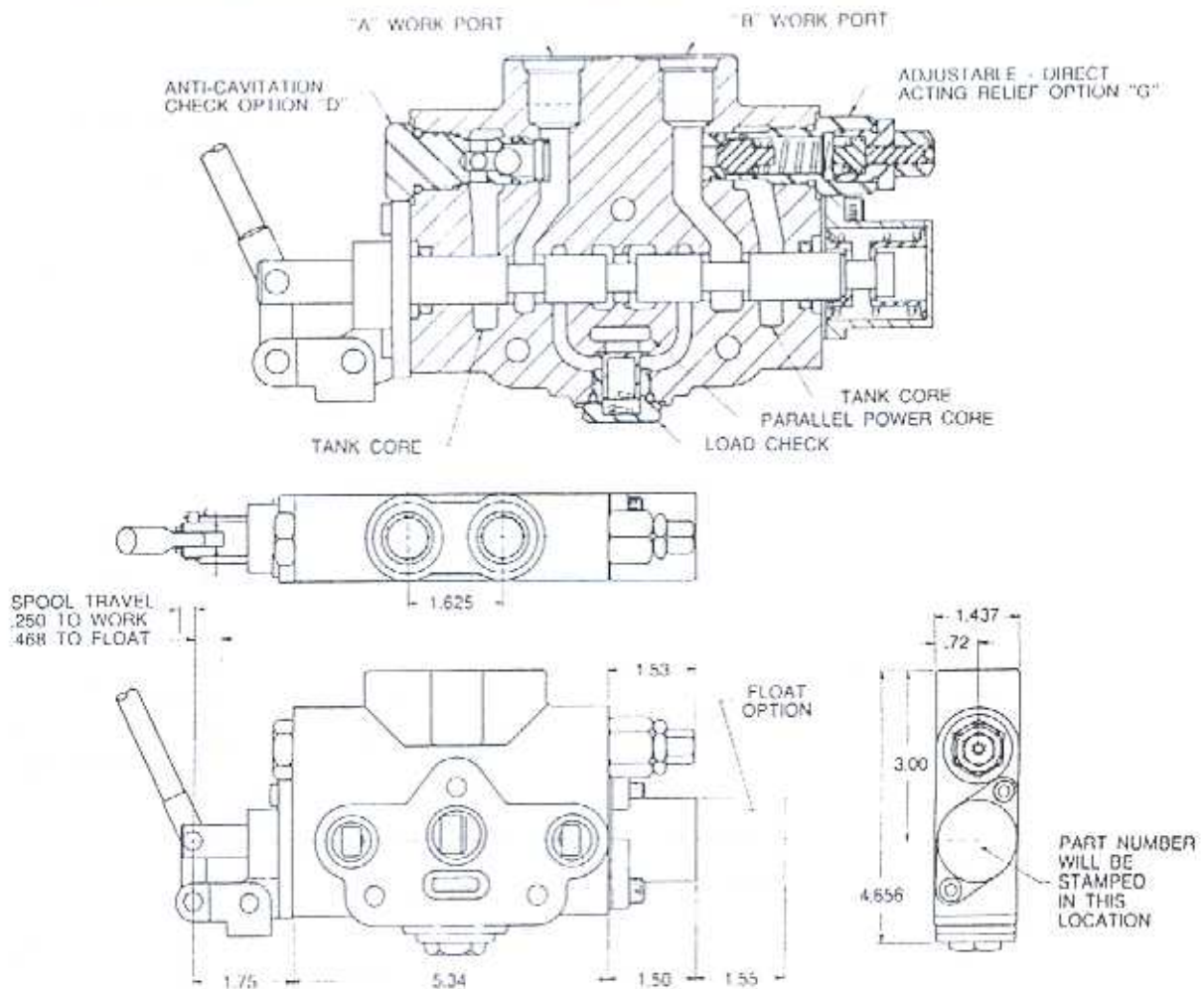
660100001	SPRING CENTER KIT
660100002	3 POSITION DETENT KIT
660100003	FRICTION DETENT KIT
660250003	LOW PRESSURE RELIEF CART.
660250002	HIGH PRESSURE RELIEF CART.
660500001	SEAL KIT SVW SECTION
660580002	SEAL KIT SVI SECTION
660580003	SEAL KIT SVE SECTION
660280002	CLOSED CENTER PLUG
660280001	POWER BEYOND PLUG #8 SAE
660180004	STD. HANDLE, PINS & LINK KIT
660100005	COMPLETE STD HANDLE
660180005	ADJ HANDLE, PINS & LINK KIT
660100007	COMPLETE ADJ HANDLE
660180008	3/4 IN. MOUNTING BOLT KIT
660180009	1 IN. MOUNTING BOLT KIT
660180010	#10 SAE PLUG W/ GAUGE PORT
660580004	SEAL KIT—O-RINGS BETWEEN SECTIONS ONLY

PORT RELIEF CARTRIDGES

660280004	NO RELIEF PLUG
660280005	ANTI-CAVITATION CHECK
*660280012	ADJUSTABLE PORT RELIEF/ ANTI-CAVITATION CHECK
*660280009	ADJUSTABLE PORT RELIEF 1500-3000 PSI
*660280011	ADJUSTABLE PORT RELIEF 500-1500 PSI
660280003	SHIM ADJUSTING PORT RELIEF 1500-3000 PSI
660280010	SHIM ADJUSTING PORT RELIEF 500-1500 PSI
672000101	.015 SHIM
672000102	.033 SHIM
672000103	.060 SHIM

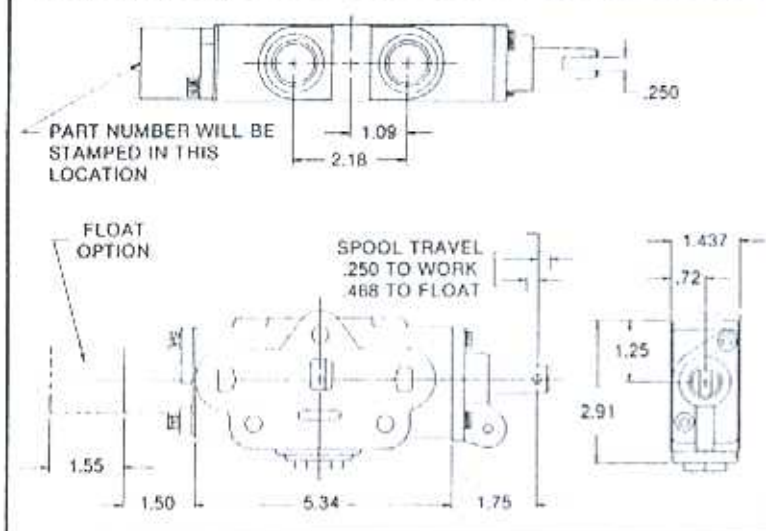
*Cannot be used on the "A" Port of work sections with Float Spool Option "D".

PORT RELIEF WORK SECTION DIMENSIONAL DATA

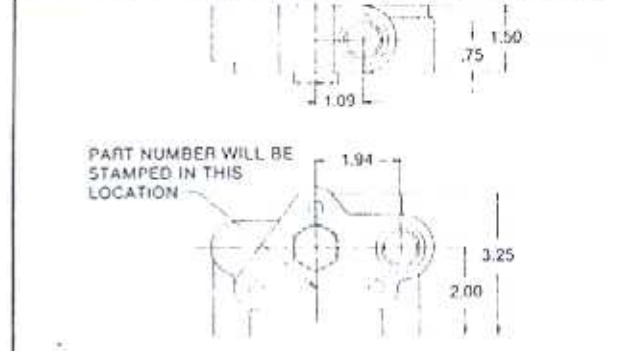


DIMENSIONAL DATA

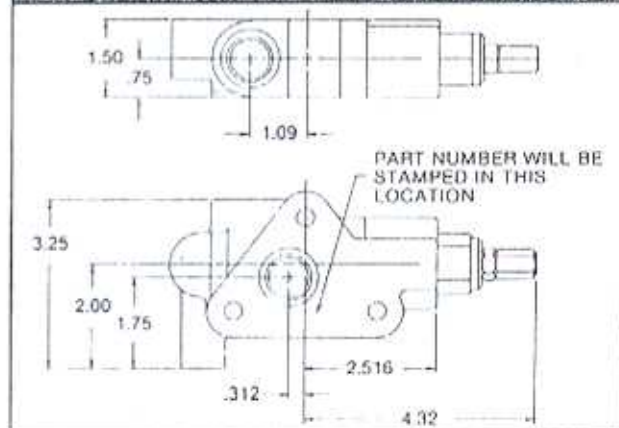
WORK SECTION



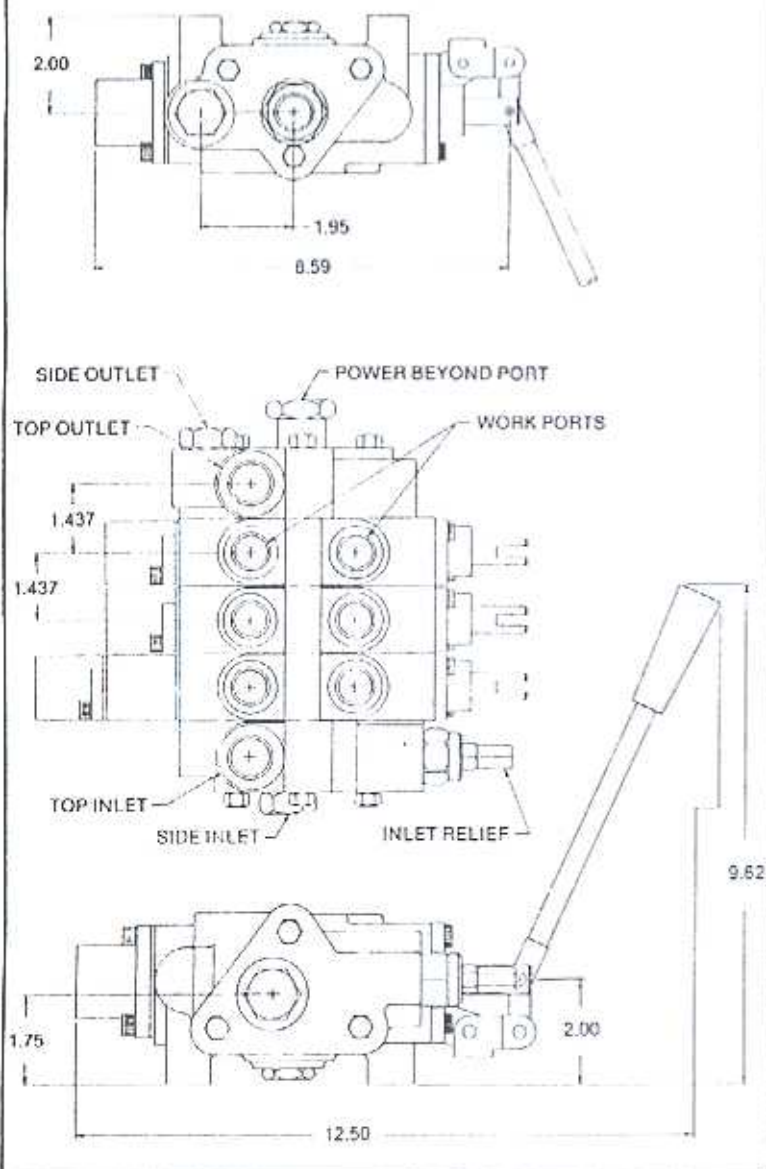
OUTLET COVER



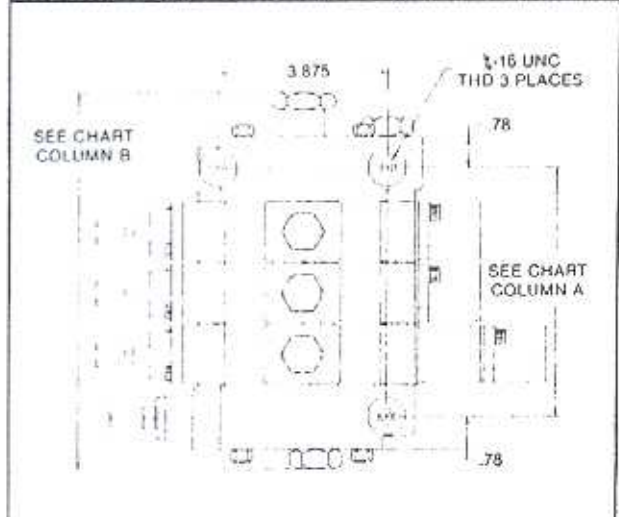
INLET COVER



TYPICAL STACK



BOTTOM VIEW OF MOUNTING DIMENSIONS



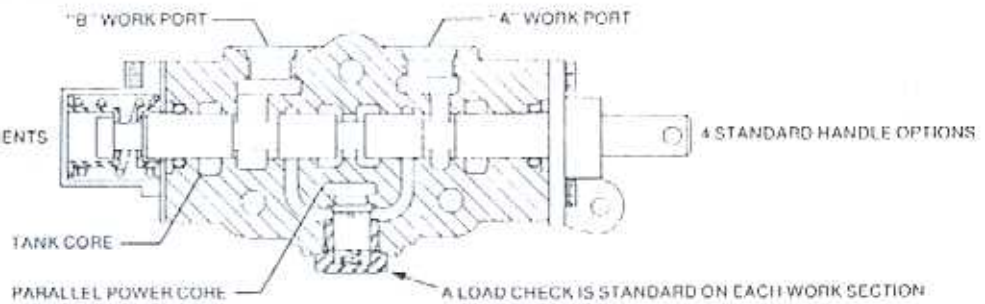
NUMBER OF WORK SECTIONS

	"A"	"B"
1	2.875	5.875
2	4.312	7.312
3	5.750	8.750
4	7.187	10.187
5	8.625	11.625
6	10.062	13.062
7	11.500	14.500
8	12.937	15.937

WORK SECTIONS

Standard and optional feature descriptions

4 STANDARD SPOOL ATTACHMENTS



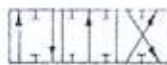
SPOOL TYPE

ALL SPOOLS ARE OPEN CENTER, P → T IN NEUTRAL, WHEN CLOSED CENTER IS REQUIRED USE OUTLET OPTION 3.

OPTION A
SINGLE ACTING
WORK PORT BLOCKED
IN NEUTRAL



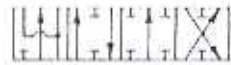
OPTION B
DOUBLE ACTING
WORK PORTS BLOCKED
IN NEUTRAL



OPTION C
DOUBLE ACTING
WORK PORTS OPEN IN
NEUTRAL

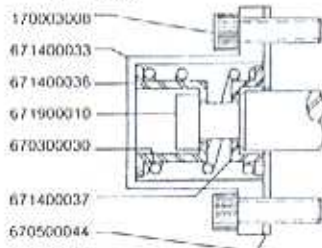


OPTION D
DOUBLE ACTING WITH
4th POSITION FLOAT

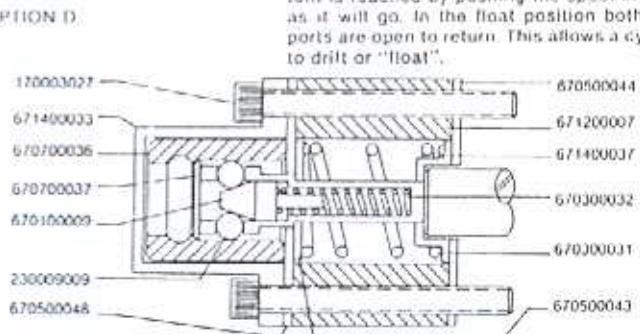


SPOOL ACTION

3 POSITION SPRING CENTER
TO NEUTRAL
OPTION A

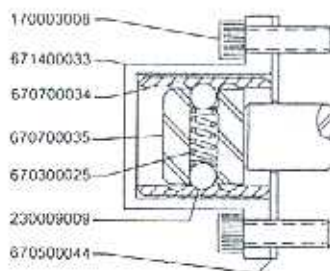


4 POSITION SPRING CENTER TO
NEUTRAL DETENT SPOOL "IN" FOR
FLOAT POSITION
OPTION D



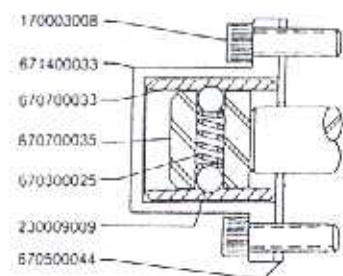
This option provides for spring center to neutral from either work position. It also provides a 4th position, float detent. The float detent is reached by pushing the spool in as far as it will go. In the float position both work ports are open to return. This allows a cylinder to drift or "float".

3 POSITION DETENT
OPTION B



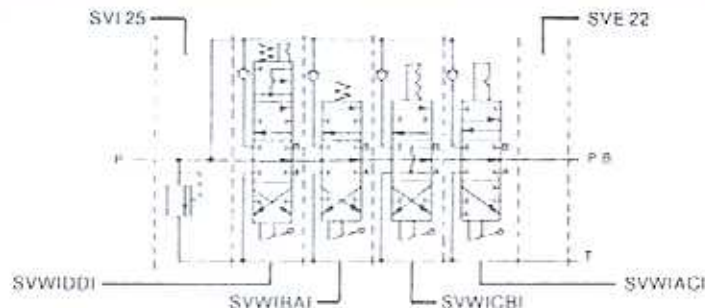
FRICION DETENT
OPTION C

This option provides for a detent in the neutral position only. As the spool is manually moved away from the neutral position it will be held in place by the friction of the detent balls on the detent sleeve. Note: Because the spool is held in place by friction only, excessive vibration may cause spool to move when not in the neutral detented position.

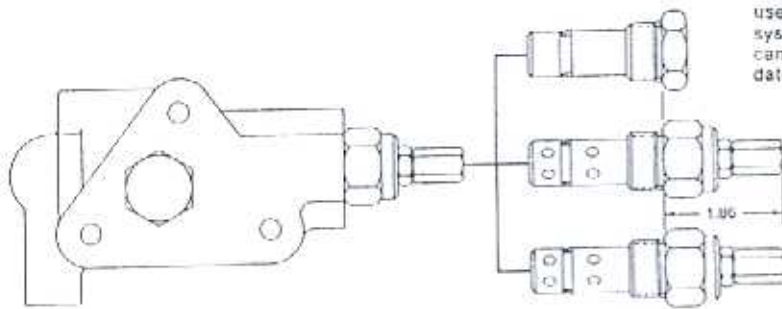


ANSI SYMBOL

EXAMPLE FOUR
SECTION STACK



INLET RELIEF OPTIONS



OPTION 1 NO RELIEF

This option provides for no built in relief. This is used when a relief is provided elsewhere in the system or in a closed center application. This plug can be replaced with a relief cartridge at a later date.

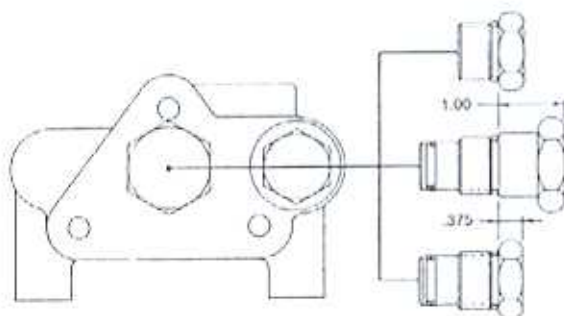
OPTION 4 LOW PRESSURE ADJUSTABLE RELIEF

This option provides for a differential poppet relief adjustable from 500-1500 PSI. The standard setting is 1000 PSI @ 10 GPM.

OPTION 5 HIGH PRESSURE ADJUSTABLE RELIEF

This option provides for a differential poppet relief adjustable from 1500-3000 PSI. The standard setting is 2000 PSI @ 10 GPM. The differential poppet relief provides smooth quiet operation with high cracking pressure.

OUTLET COVER OPTIONS



OPTION 1 STANDARD OPEN CENTER OUTLET WITH CONVERSION PLUG

This is the standard outlet option. This option allows for conversion in the field for power beyond or closed center applications. When the spools are in neutral the inlet is unloaded to tank.

OPTION 2 POWER BEYOND OUTLET WITH #8 SAE BEYOND PORT

This option provides for a high pressure power beyond port. This would be used if a valve is to be added downstream. The outlet must be connected to tank. When the spools are in neutral the inlet is connected to power beyond port.

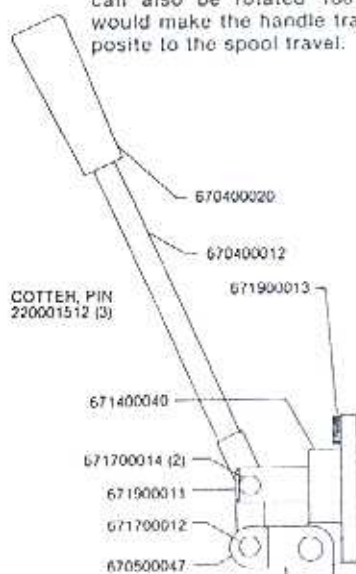
OPTION 3 CLOSED CENTER OUTLET

This option provides for closed center operation. This is typically used with a variable displacement pressure compensated pump or in a system with an unloading valve. When the spools are in neutral the inlet port is blocked.

HANDLE OPTIONS

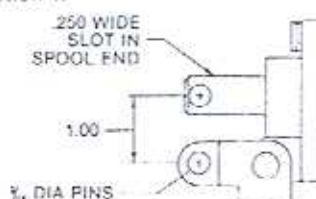
OPTION 1 STANDARD LEVER HANDLE

The handle is shipped unattached. The handle can be installed as shown or it can be rotated 180° for applications where valve is mounted with the work ports down. The clevis assembly can also be rotated 180°. This would make the handle travel opposite to the spool travel.



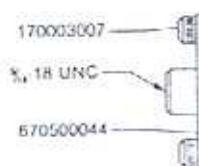
OPTION 2 LESS HANDLE ONLY

This option provides the clevis assembly, clevis pins, and cotter. This option would be used if a special handle or linkage is installed by the customer. The parts are the same as option 1.



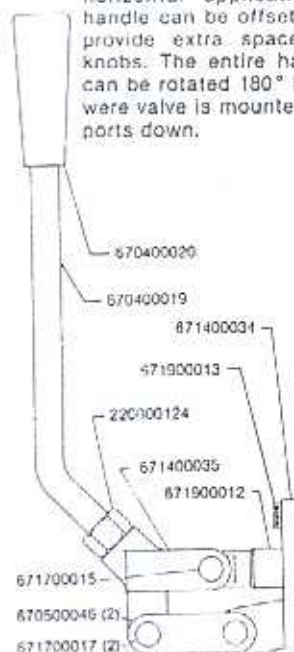
OPTION 3 LESS COMPLETE HANDLE

This option provides no handle or clevis. A retainer plate is installed to hold the seals.



OPTION 4 ADJUSTABLE HANDLE

This option provides a heavy duty adjustable handle for vertical or horizontal applications. Also the handle can be offset left or right to provide extra space between the knobs. The entire handle assembly can be rotated 180° for applications where valve is mounted with the work ports down.



PRESSURE COMPENSATED ADJUSTABLE FLOW CONTROL VALVES

MODEL RD-100 TOP PORT FLOW CONTROL



MODEL RD-1900 SIDE PORT FLOW CONTROL



The PRINCE valve models RD-100 and RD-1900 are pressure compensated adjustable flow control valves. By rotating the handle the flow out the "CF" or controlled flow port can be varied within the range given in the chart below. Any remaining flow is bypassed to the "EF" or excess flow port. This flow can be used to power another circuit or can be returned to tank. Once the controlled flow is set it will remain nearly constant with variations in pressure on either the controlled or excess flow ports. Please note, if during operation the controlled flow port is blocked the valve will compensate in such a way as to shut off flow to the excess port.

These valves can also be used as a restrictive flow control by plugging the excess flow port.

The PRINCE valve models RDRS-100 and RDRS-1900 have a built in adjustable pressure relief. For these models the excess flow port **must** be connected to tank.

It should be noted that whenever these or any valve is used to bypass or restrict flow heat will be generated. Steps maybe required to keep oil temperature from becoming too high.

VALVE SPECIFICATIONS:

Capacity: 30 gpm max inlet flow
Pressure: 3000 psi max
Weight: RD-100 8 lbs.
RD-1900 9 lbs.

STANDARD MODELS AVAILABLE

MODEL NUMBER		PORT SIZES	CONTROLLED FLOW RANGE	FIELD REPAIR KITS: Handle hardware kit 660301002 Seal Kit 660501001
RD-137-8	RD-1937-8	3/8 NPTF	0-8 GPM	
RD-150-8	RD-1950-8	1/2 NPTF	0-8 GPM	
RD-150-16	RD-1950-16	1/2 NPTF	0-16 GPM	
RD-175-16	RD-1975-16	3/4 NPTF	0-16 GPM	
RD-175-30	RD-1975-30	3/4 NPTF	0-30 GPM	
RD-108-8	RD-1908-8	#8 SAE	0-8 GPM	
RD-112-30	RD-1912-30	#12 SAE	0-30 GPM	
RDRS-150-16	RDRS-1950-16	1/2 NPTF	0-16 GPM	These models have built in relief set at 1500 psi @ 10 GPM.
RDRS-175-30	RDRS-1975-30	3/4 NPTF	0-30 GPM	

Special combinations of port size and controlled flow range are available in OEM quantities. Please consult your sales representative.

SYMBOL

