Tube-Line 5500

Parts & Service

Notes

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

Caution Stay Away From Hoop When Engine Is Running

Inside of Control Panel , control relays are numbered CR1 to CR5 from left to right. Relay CR1 is wired to table trigger. CR1 will activate solenoid valve to extend ram cylinder. CR2 is wired to switch at the front slider, when ram is extended to this switch CR2 will close, energizing the wrap motor valve. Ram cylinder will extend and wrap motor will turn until ram comes in contact with slider switch at rear, then CR1 and CR2 will turn off and CR3 will turn on. Wrap motor will stop and ram cylinder will retract until ram cylinder trips limit switch at front end of table. All controls will then turn off. Testing can be done by pushing trigger plate and wait until machine goes through cycle, or you can push small square button on the front of relay 1 and let machine go through cycle.

When control relays are activated a small light goes on inside the relay.

When running machine through the cycle and wrapper motor or the cylinders do not work, check flowcontrol 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 grounded to frame and engine switch is not in stop position.

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

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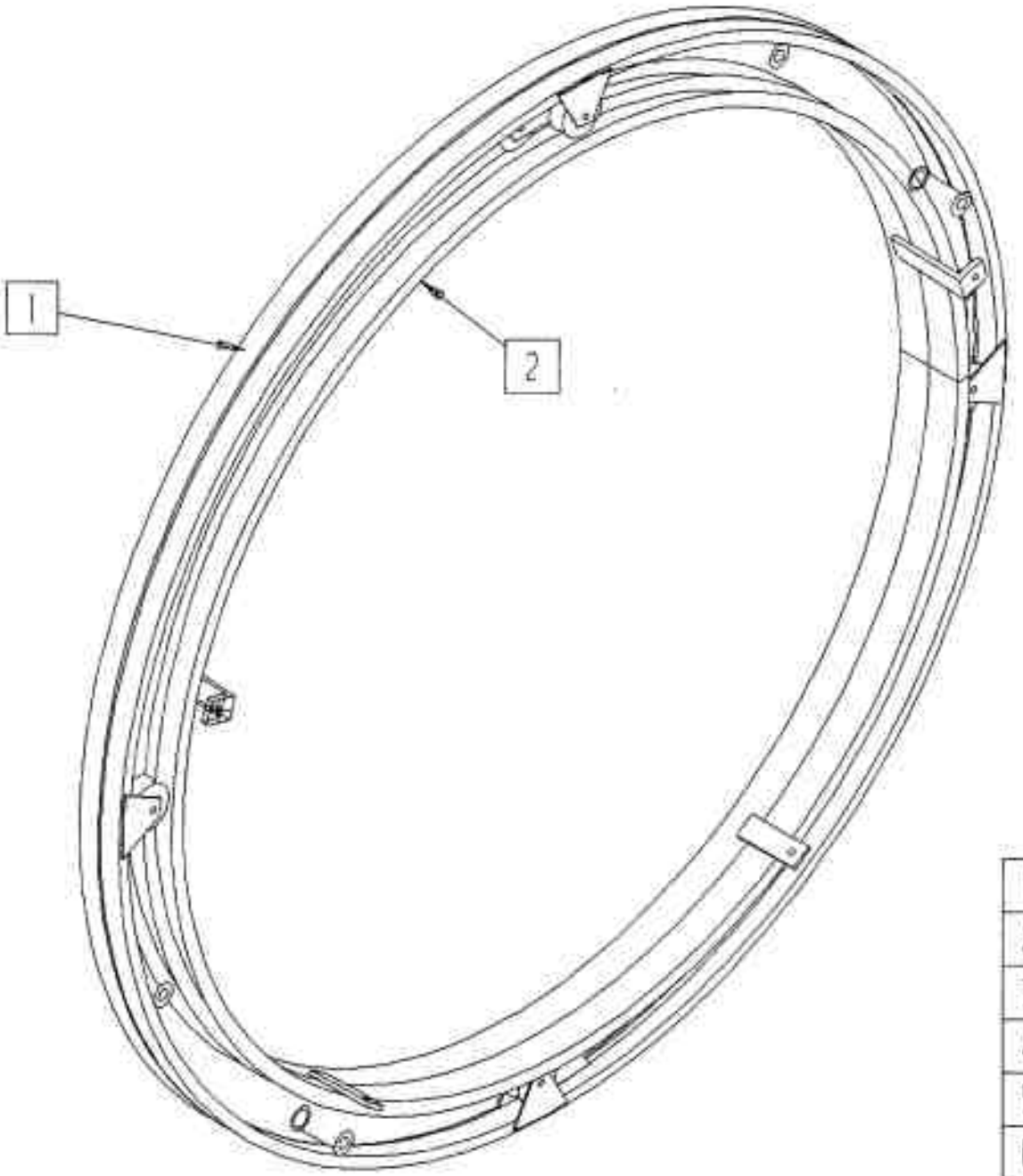
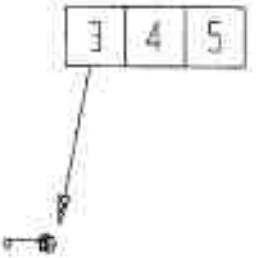
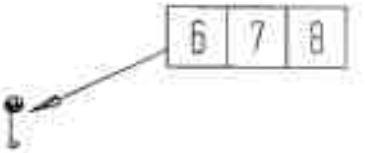
Tube-Line 5500
Hoop



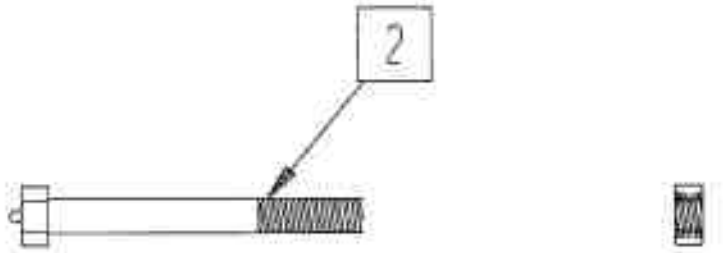


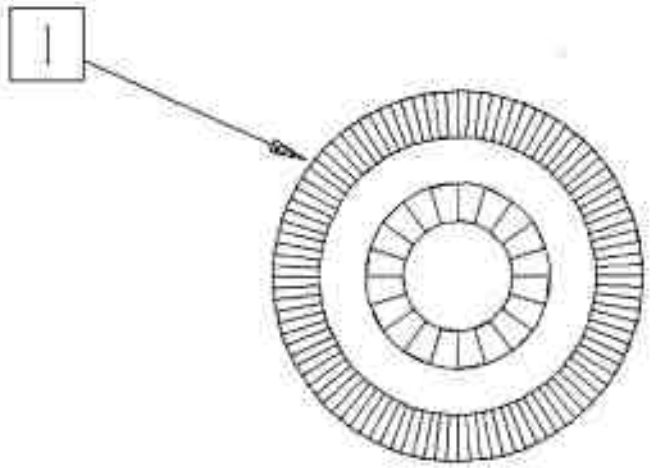


1	Outer Ring
2	Inner Ring
3	1/2 x 2 Bolt
4	1/2 Nut
5	1/2 Lockwasher TSSHD
6	5/8 x 3 1/2 Bolt
7	5/8 Nut
8	5/8 Lockwasher

Tube-Line 5500

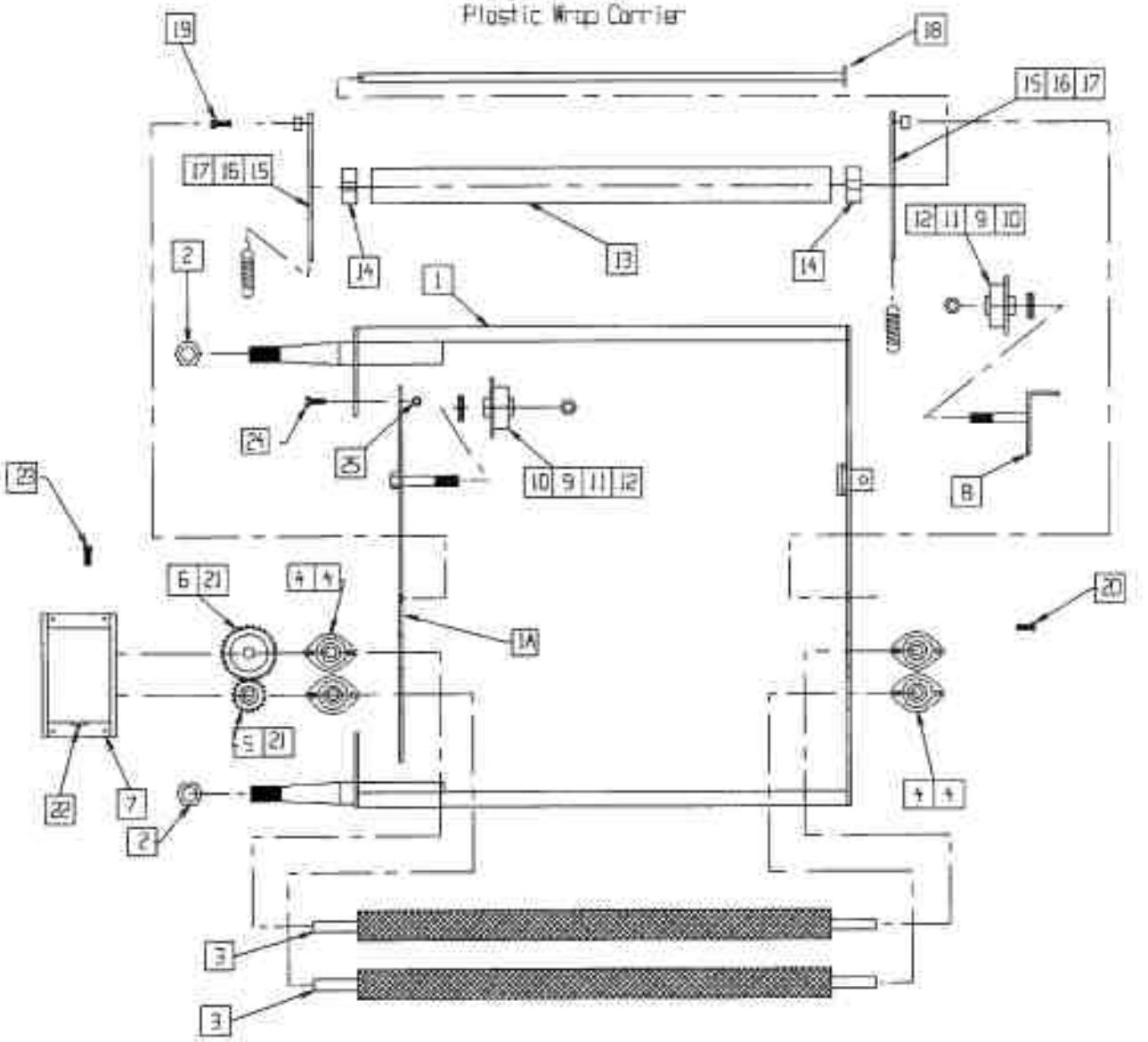
Hoop wheels





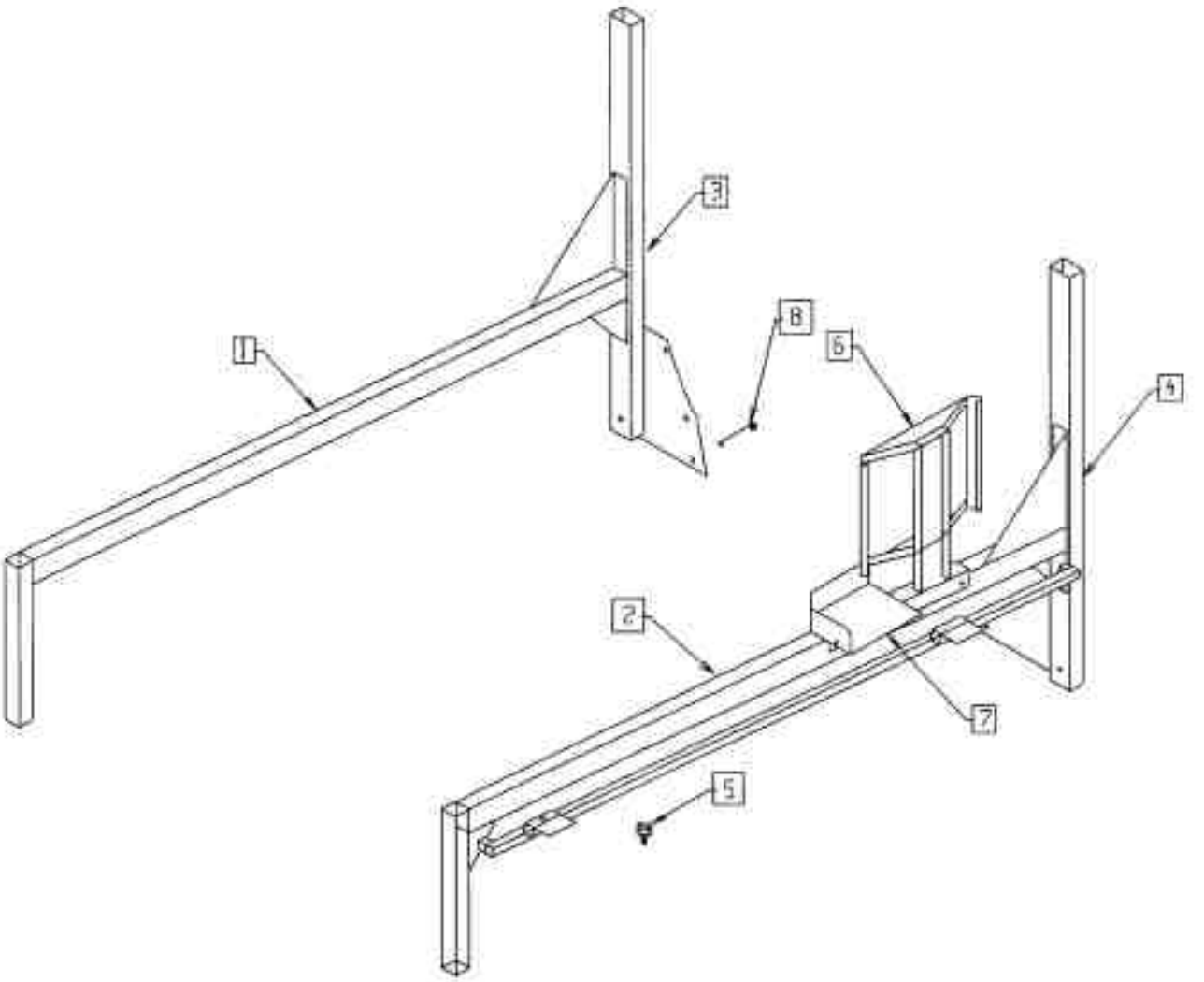
1	4 in wheel
2	axle bolt c/w Locknut

Tube - Line 550
Plastic Wrap Carrier



1	Main Wrap Bracket
1A	Main Wrap Side Insert
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	HMPVC Bearing
15	ABS Bracket
16	Spacer
17	Spring
18	Axle Shaft
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
24	3/8 x 1 #5 Bolt
25	3/8 Locknut

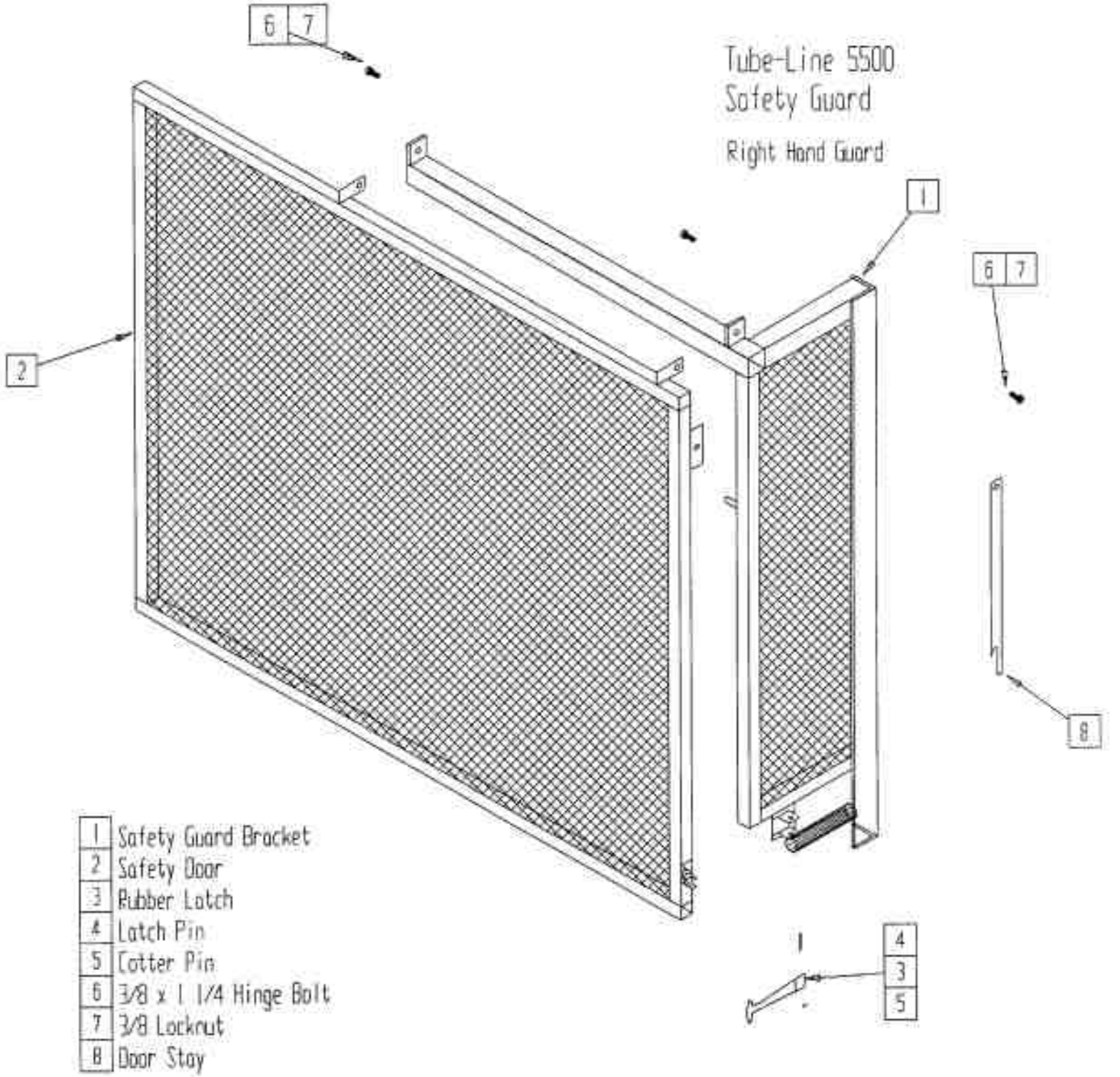
TubeLine 9500
Hoop Brace Assy.



1. Right Hand Hoop Brace
2. Left Hand Hoop Brace
3. Right Hand Hoop Post
4. Left Hand Hoop Post
5. Switch Adjuster Screw
6. Automatic Control Panel Mount
7. Manual Control Mount
8. 1/2 x 1 1/2 Bolt

Tube-Line 5500
Safety Guard

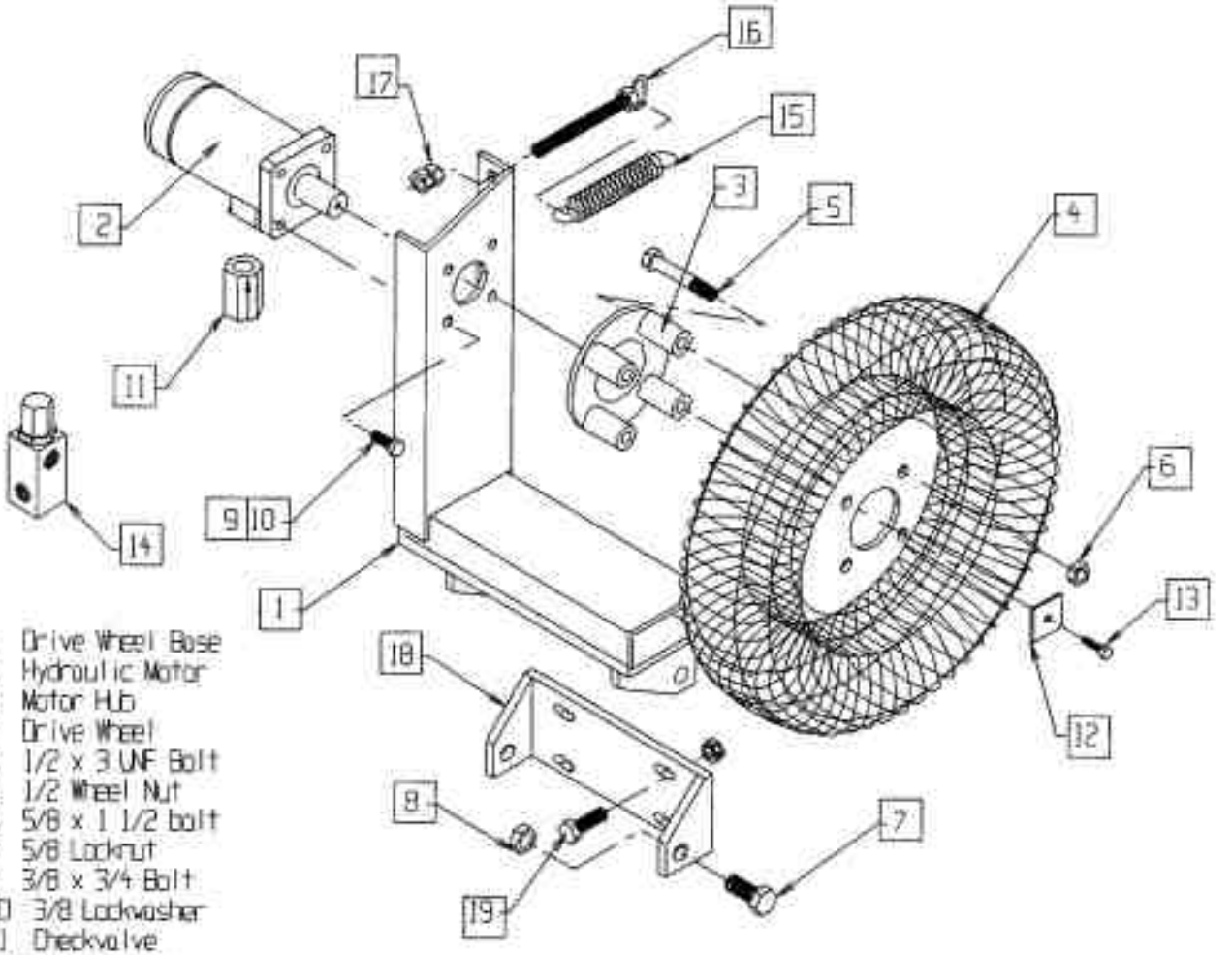
Right Hand Guard



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

Tubeline 5500

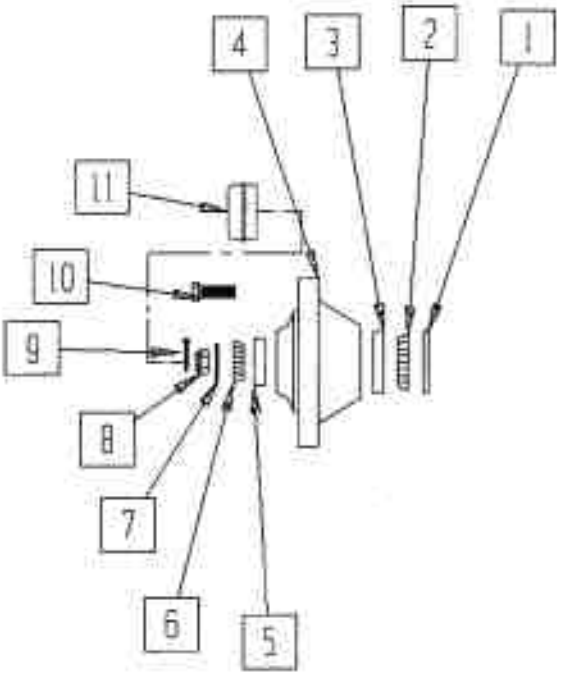
Drive Wheel



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 5/8 x 1 1/2 bolt
8 5/8 Locknut
9 3/8 x 3/4 Bolt
10 3/8 Lockwasher
11 Checkvalve
12 Wheel Washer
13 1/4 x 1 Bolt c/w Lockwasher
14 Relief Valve (manual model only)
15 Wheel Tensioner Spring
16 Spring Tensioner Bolt
17 1/2 Nuts
18 Drive Wheel Base Bracket
19 3/8 x 1 1/2 bolt, c/w nut, washer & lockwasher

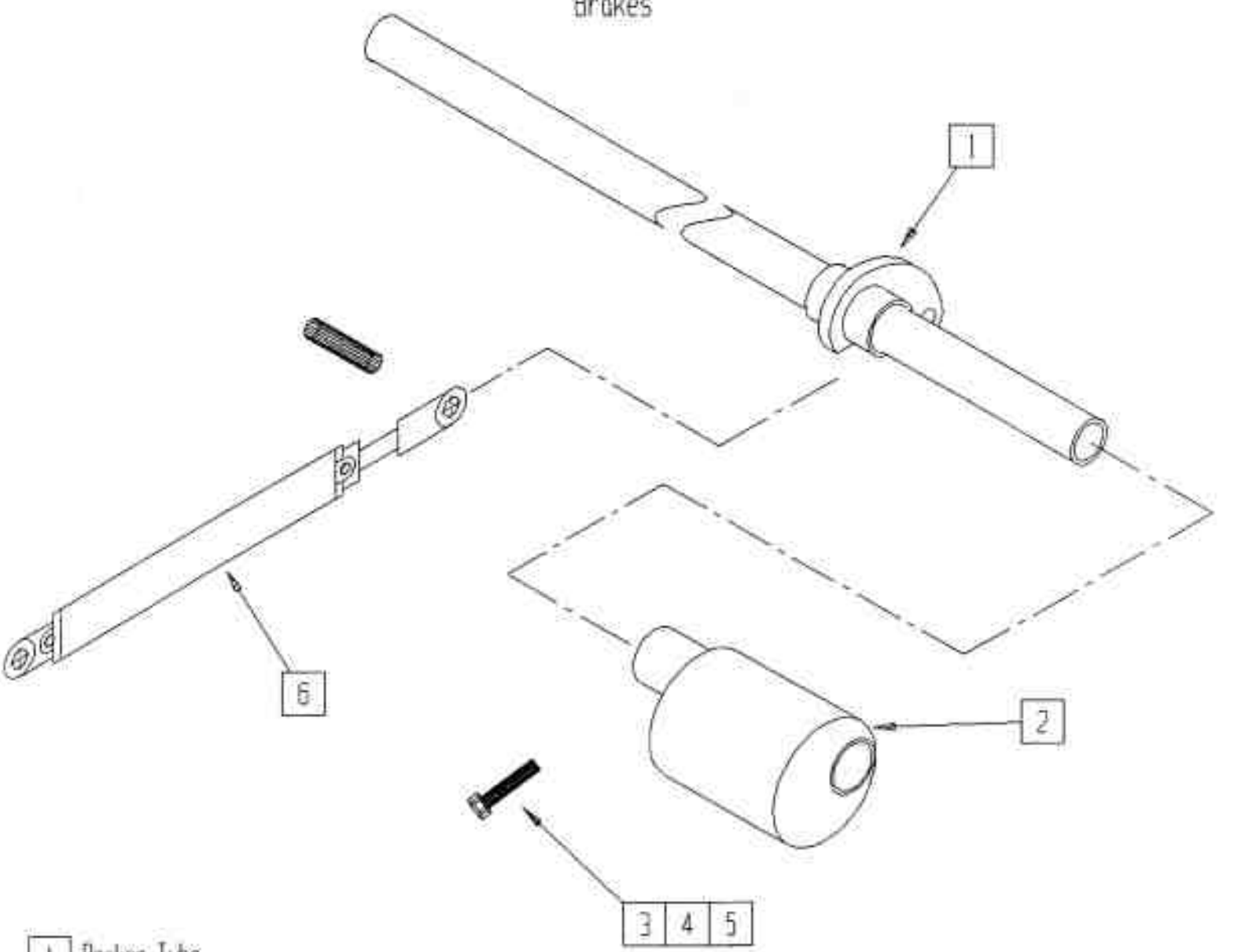
Tube-Line 5500

Axle/spindle/hub



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

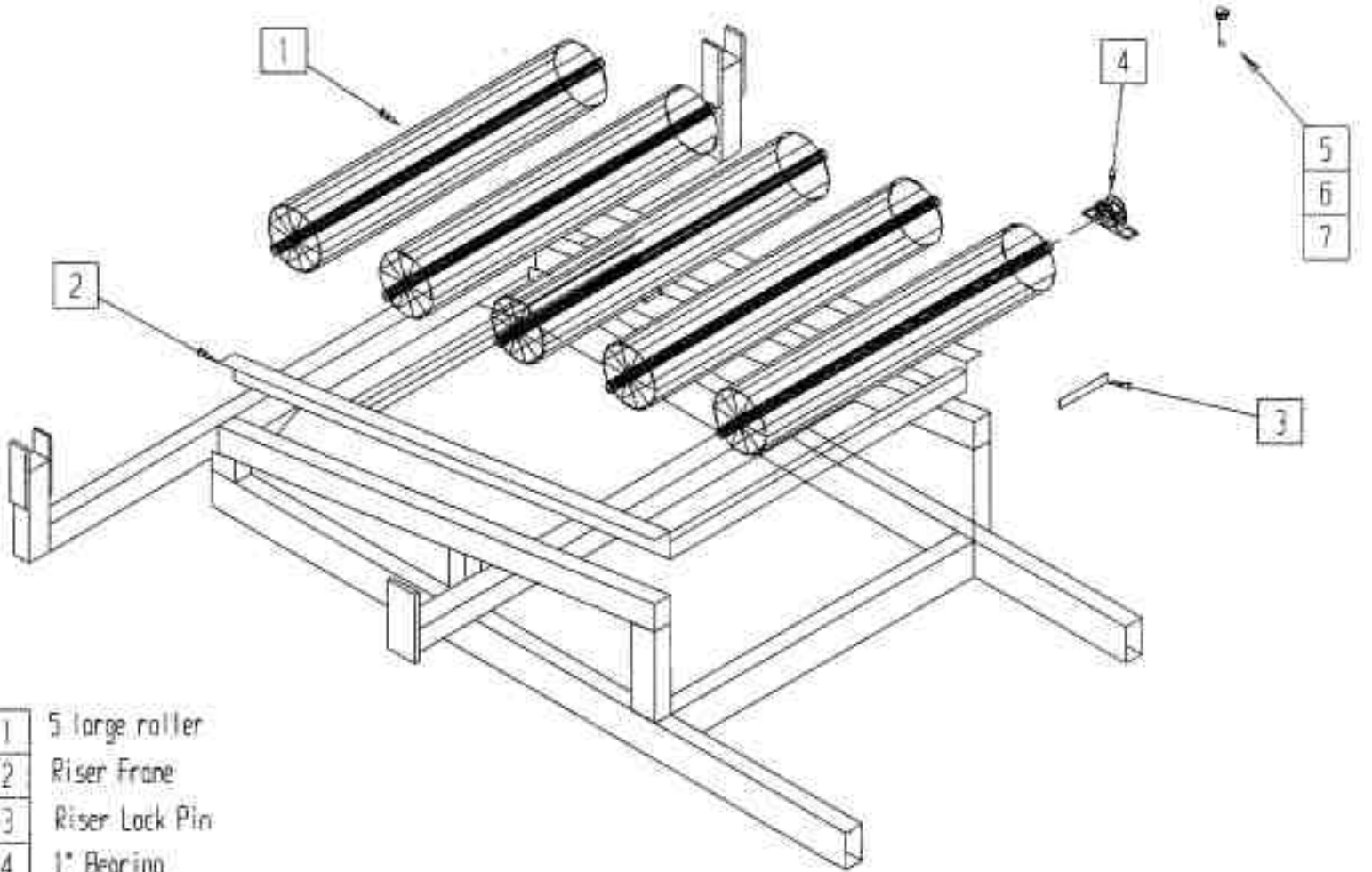
Tube - Line 5500
Brakes



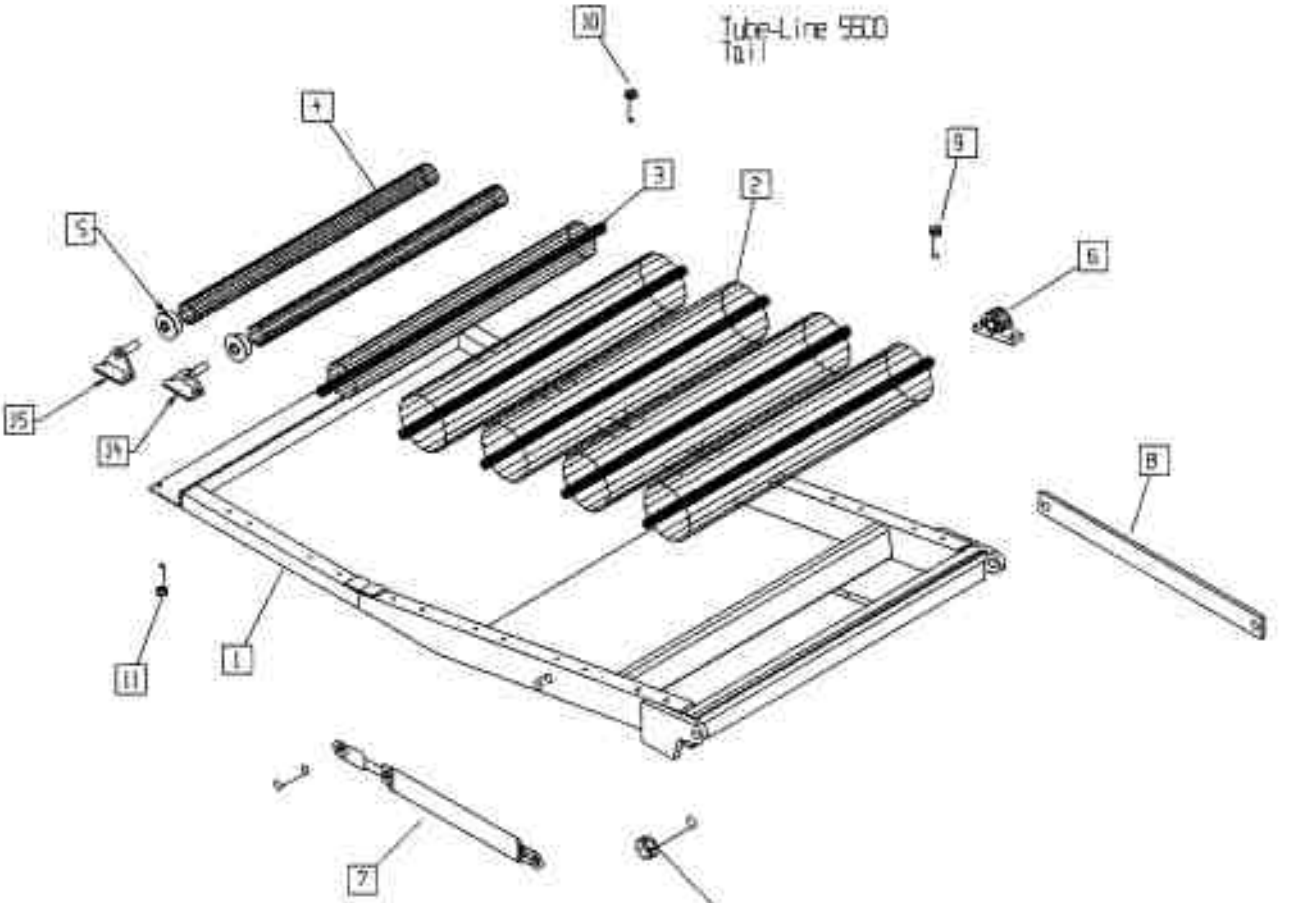
1	Rocker Tube
2	2 pc brake eccentric
3	2 pc 1/2 x 3 1/2 bolt
4	2 pc lockwasher
5	2 pc 1/2 nut
6	2 1/2 x 8 hydraulic cylinder

Tube-Line 5500

rear roller

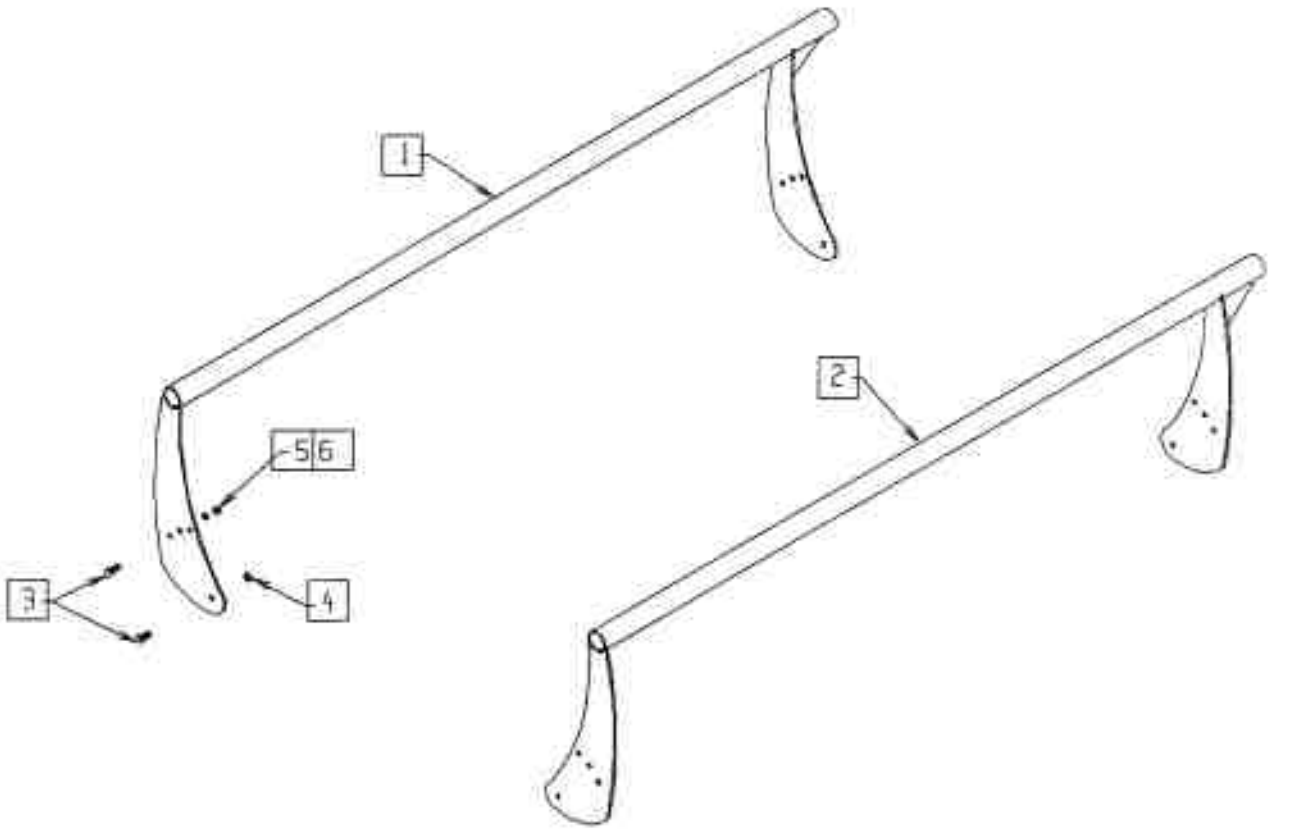


1	5 large roller
2	Riser Frame
3	Riser Lock Pin
4	1" Bearing
5	20 pc 3/8 x 1 1/2 Bolt
6	20 pc 3/8 lockwasher
7	20 pc 3/8 Flatwasher



1	Tail Base
2	4 large roller
3	1 pc 4" roller
4	2 pc 3" roller
5	4 pc 3/4" bearing
6	10 pc 1" bearing
7	3 X 12 hydraulic cylinder
8	tail tie bar
9	3/8 x 1 1/2 bolt
10	5/16 x 1 bolt
11	4 pc 5/16 x 1 1/2 bolt
12	2 pc 1 x 3 1/2 bolt
13	2 pc 1" Nylocknut
14	First Small Roller bracket
15	Last Small Roller bracket

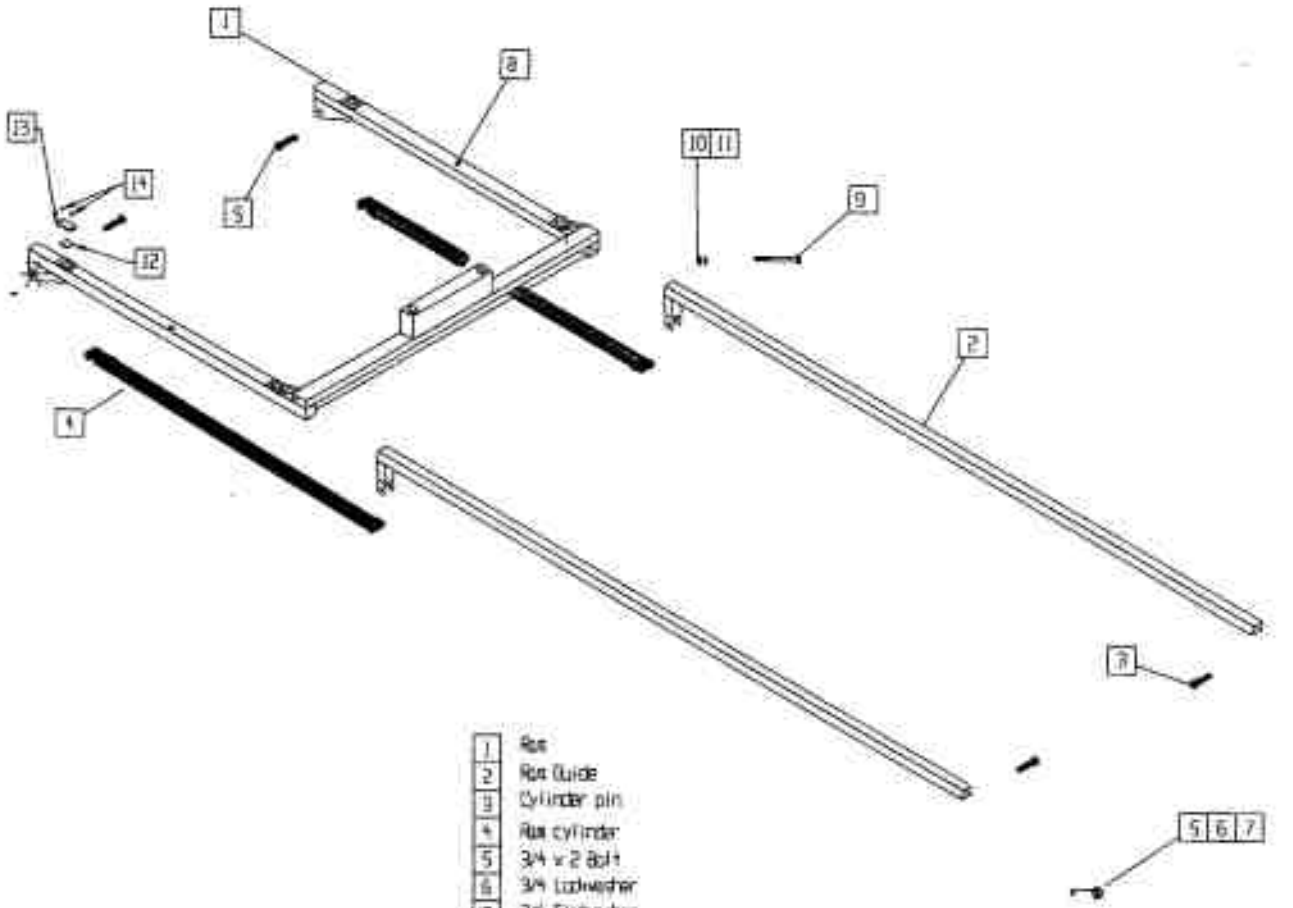
Tubeline 5500
Bale Saddle



1 Bale Saddle (Right Side)
2 Bale Saddle (Left Side)3
3 1/2 x 1 1/4 Bolt
4 1/2 Locknut
5 1/2 Nut
6 1/2 Lockwasher

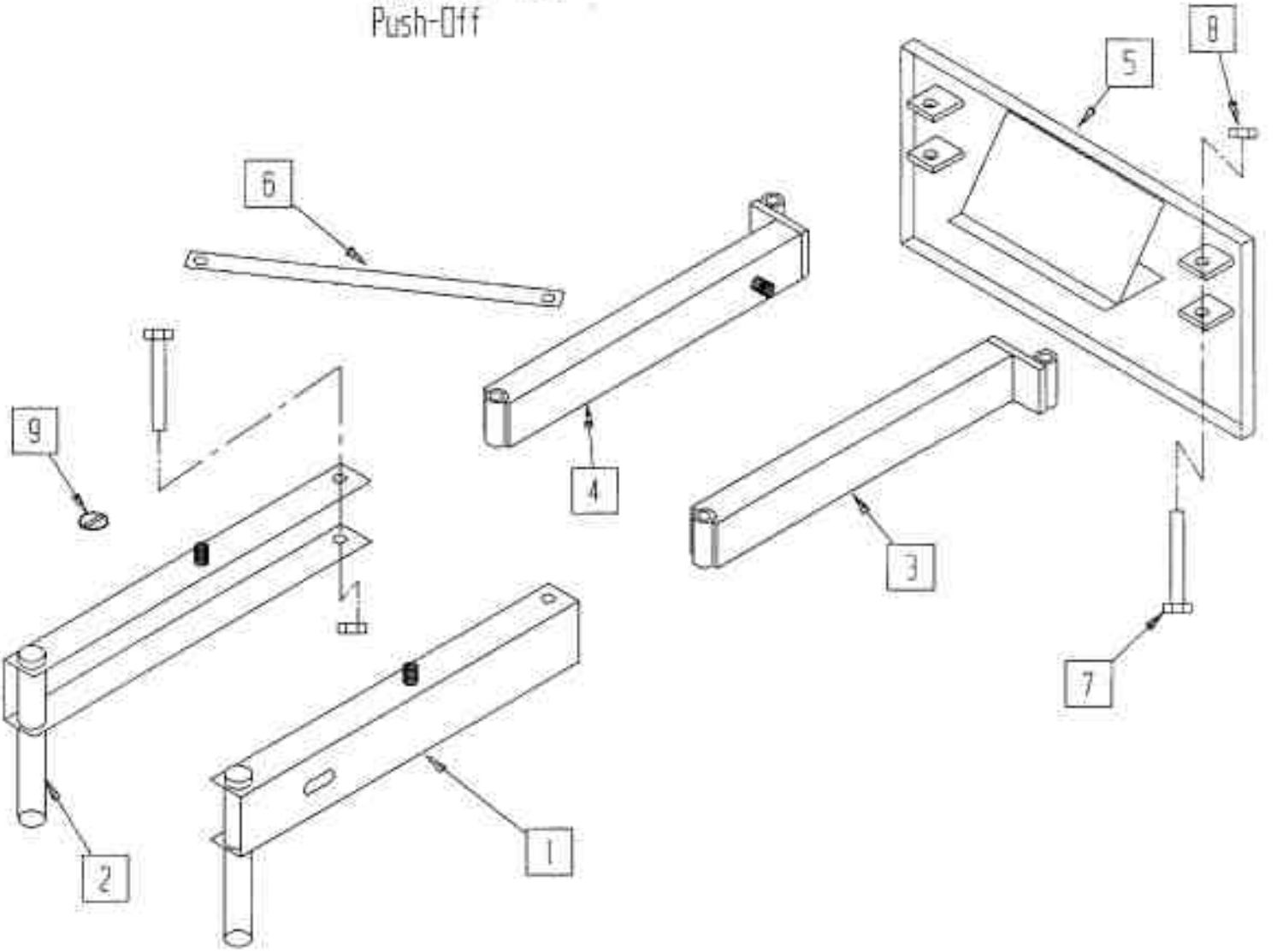
Tube-Line 5500

Ram



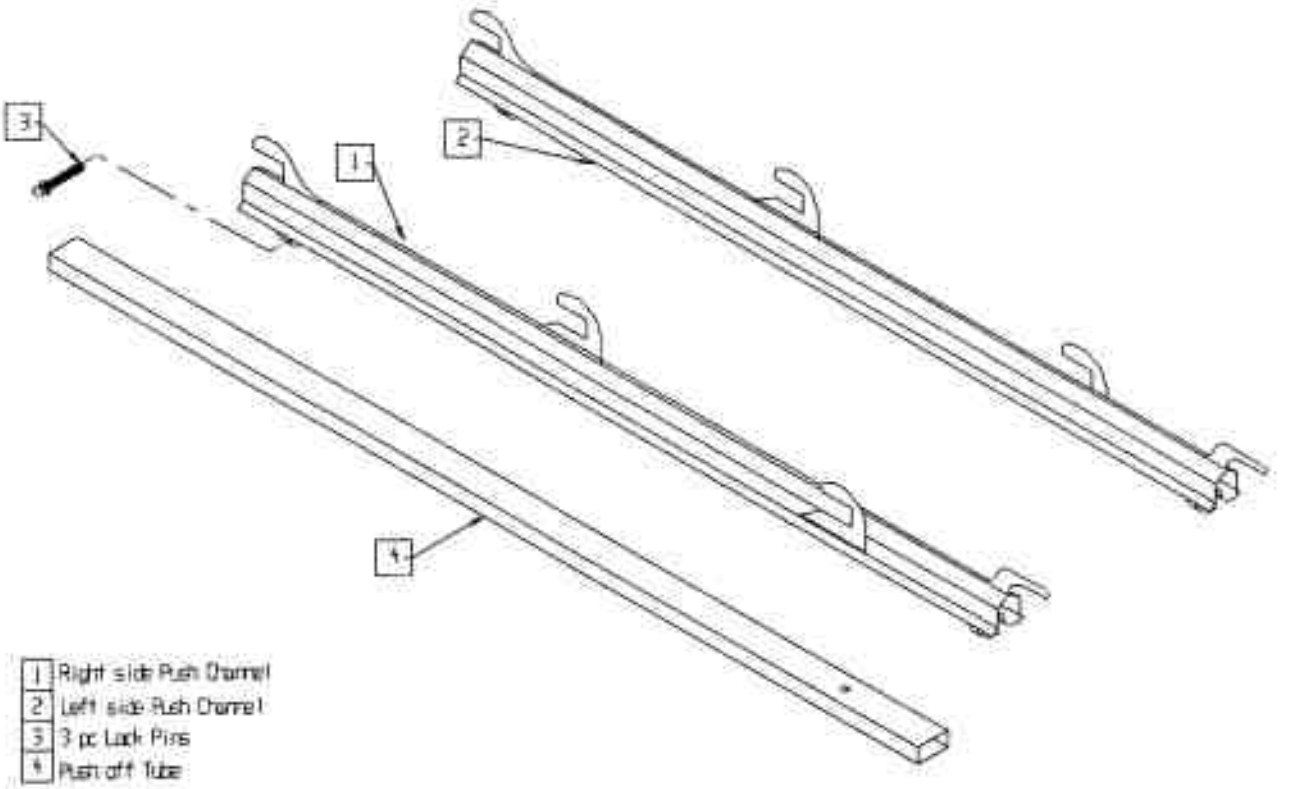
1	Ram
2	Ram Guide
3	Cylinder pin
4	Ram cylinder
5	3/4 x 2 Bolt
6	3/4 Lockwasher
7	3/4 Flatwasher
8	2 pc 1/4 - 28 grease fitting
9	2 pc 1/2 x 4 bolt
10	2 pc 1/2 nut
11	2 pc 1/2 lockwasher
12	1/2 x 2 x 2 HMWPE slider block
13	Slider Retainer
14	1/4 x 1/2 Hex Socket Bolt

Tube-Line 5500
Push-Off



1	Left Front Arm
2	Right Front Arm
3	Left Rear Arm
4	Right Rear Arm
5	Push Plate
6	2 pc X Bar
7	4 pc 3/4 x 5 Bolt
8	4 pc 3/4 Nylocknut
9	4 pc 3/16 Lynch Pin

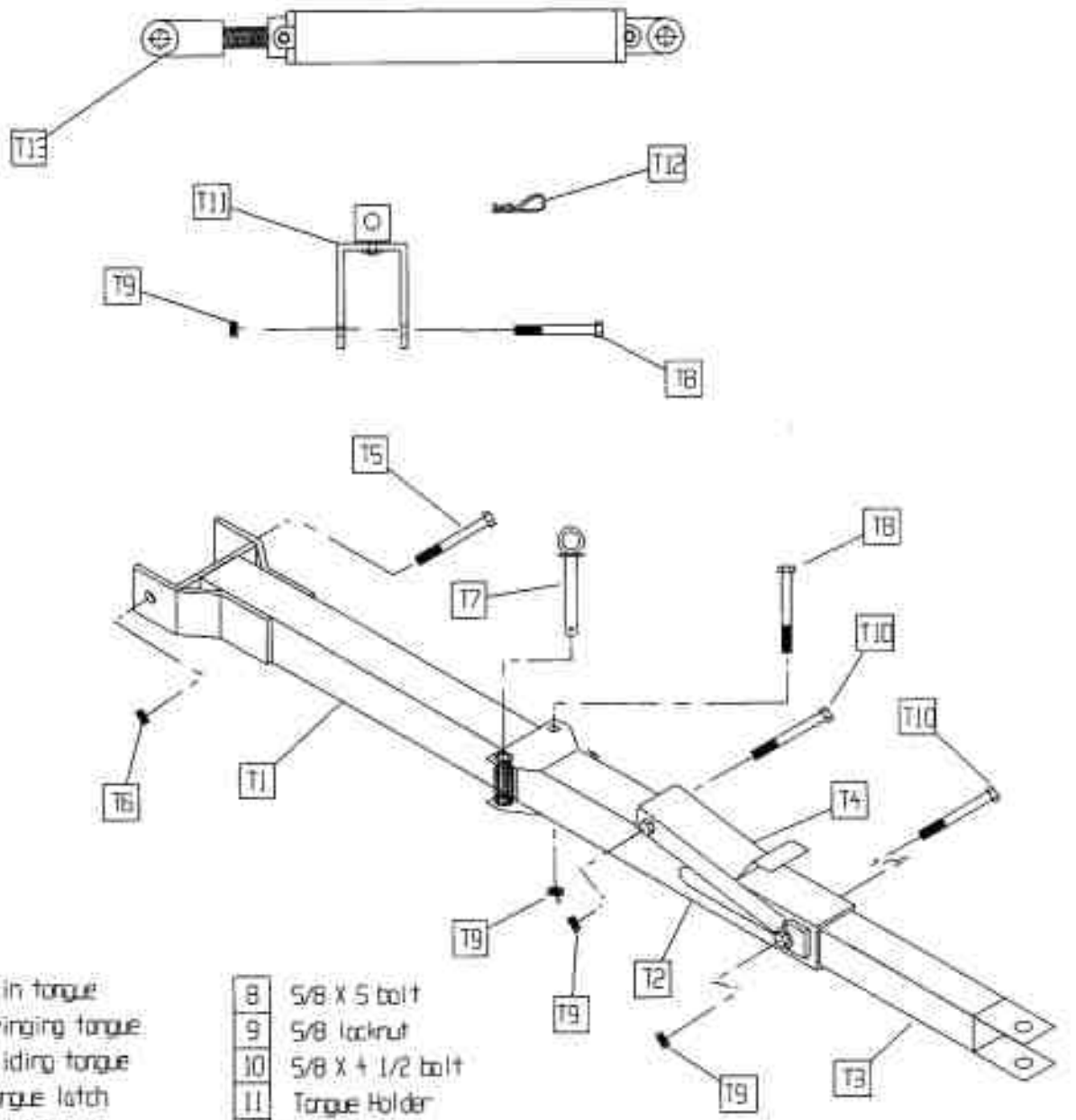
Tubeline 5600
Push off Channel



1 Right side Push Channel
2 Left side Push Channel
3 3 pc Lock Pins
4 Push off Tube

Tube-Line 5500

Tongue

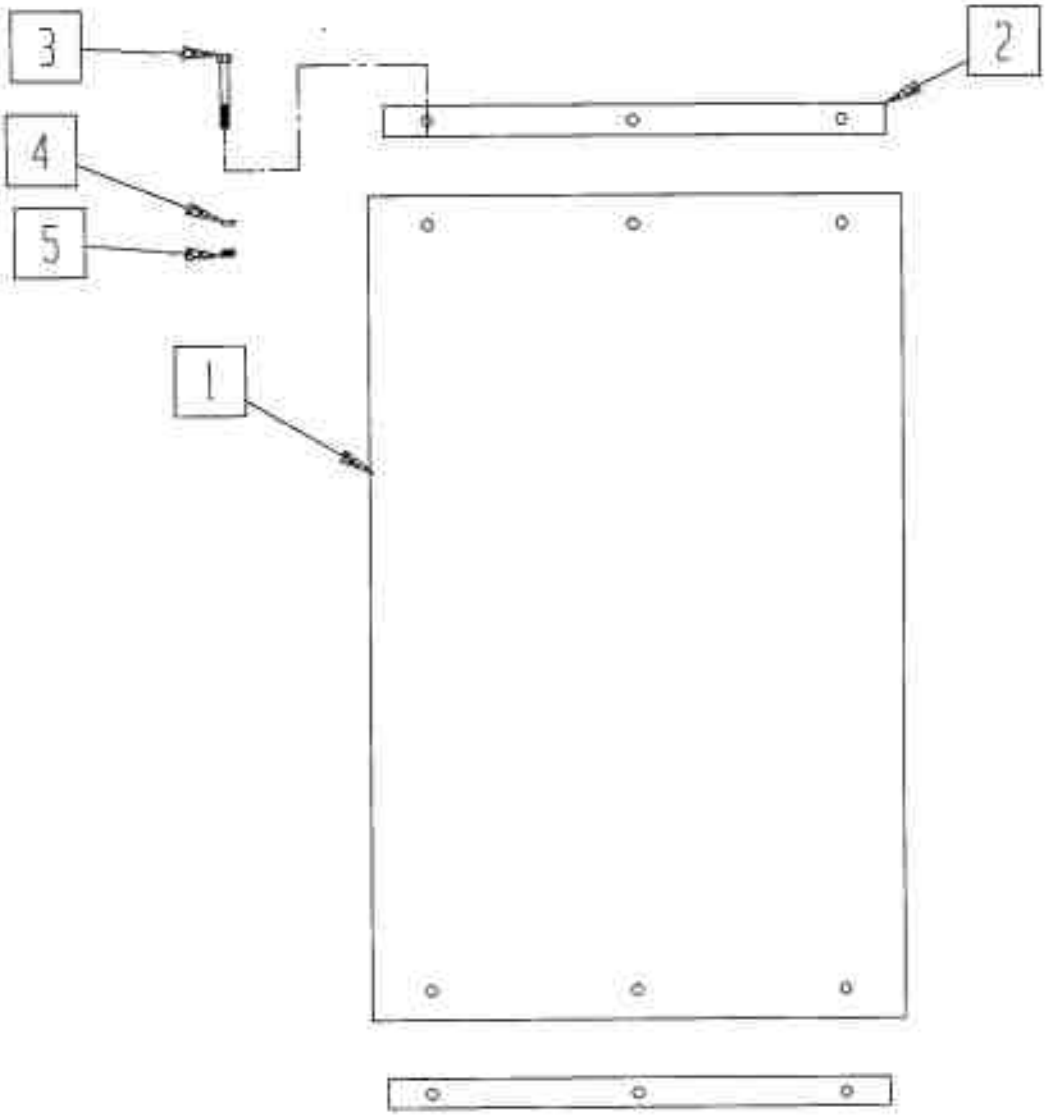


1	Main tongue
2	Swinging tongue
3	Sliding tongue
4	Tongue latch
5	7/8 x 8 bolt
6	7/8 locknut
7	Tongue pin

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

Tube-Line 5500

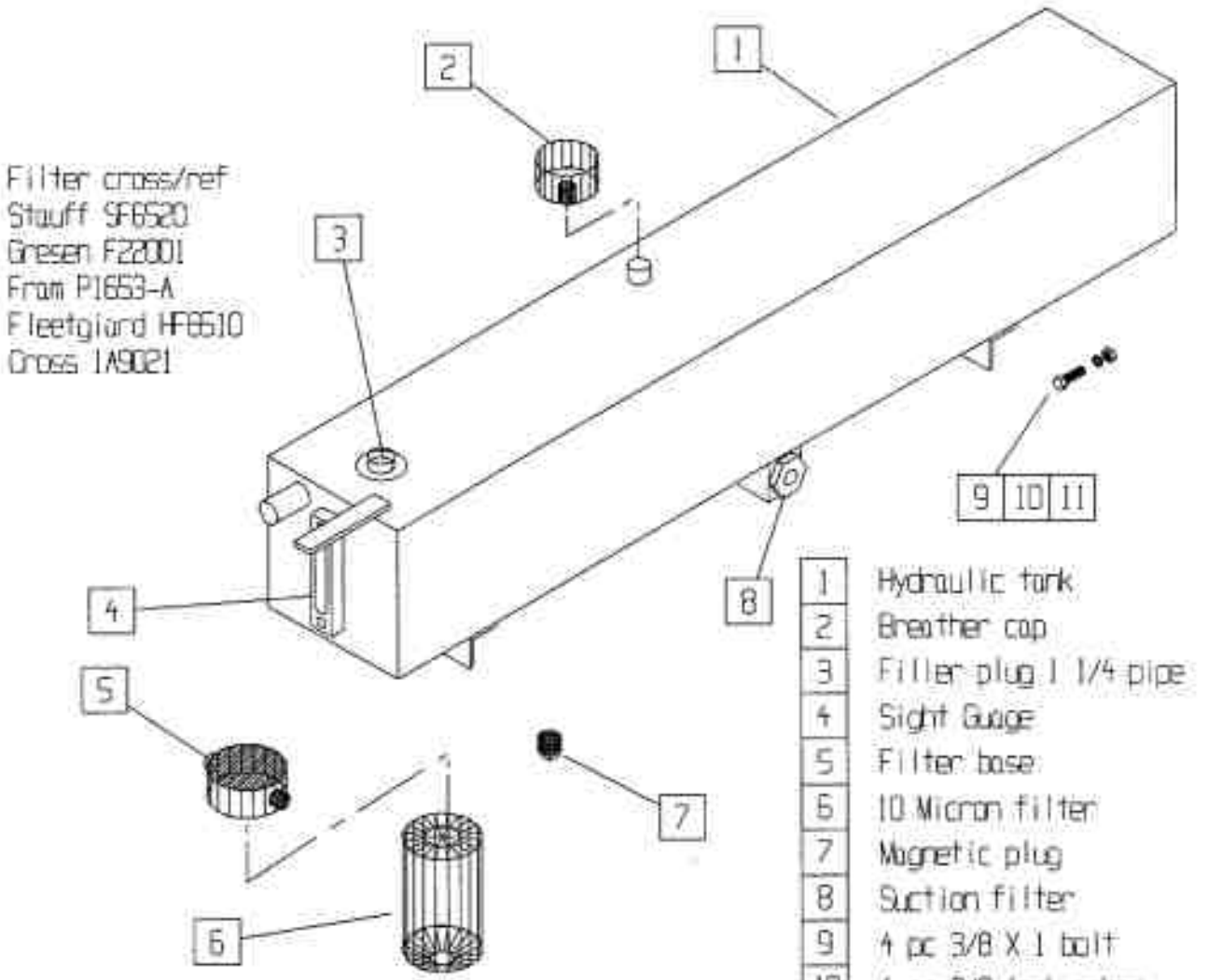
Mud Flap



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

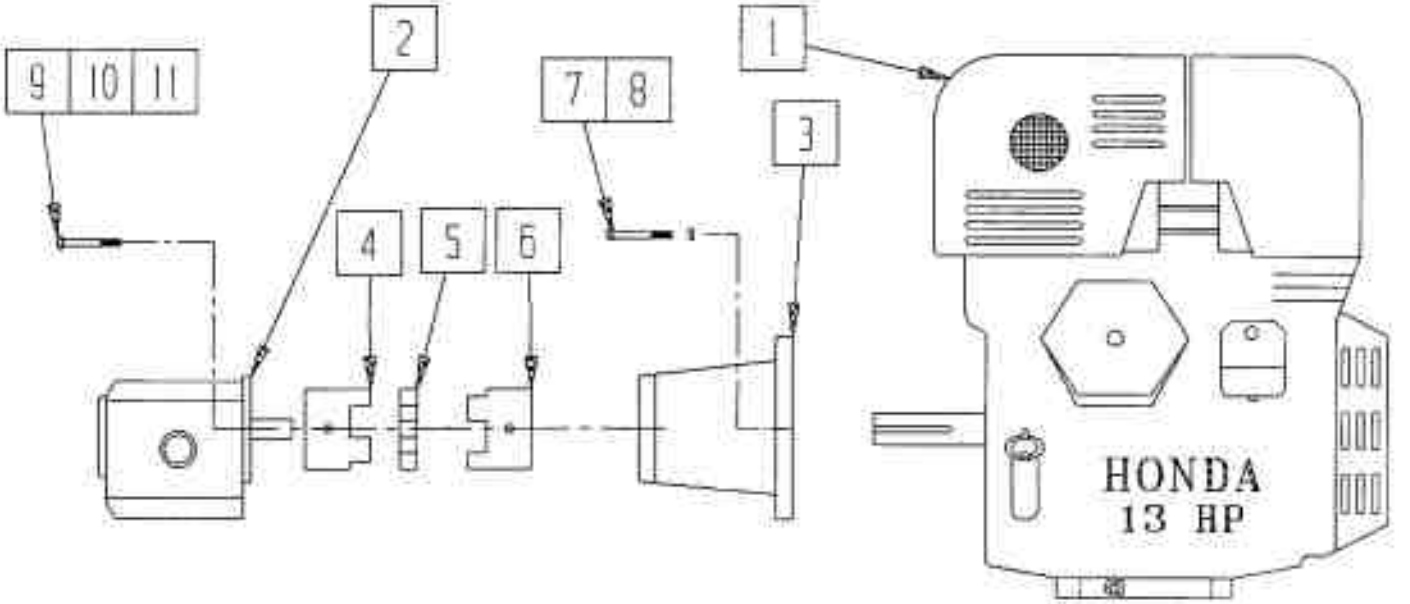
Tube-Line 5500

Hydraulic tank



1	Hydraulic tank
2	Breather cap
3	Filler plug 1 1/4 pipe
4	Sight Guage
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 5500

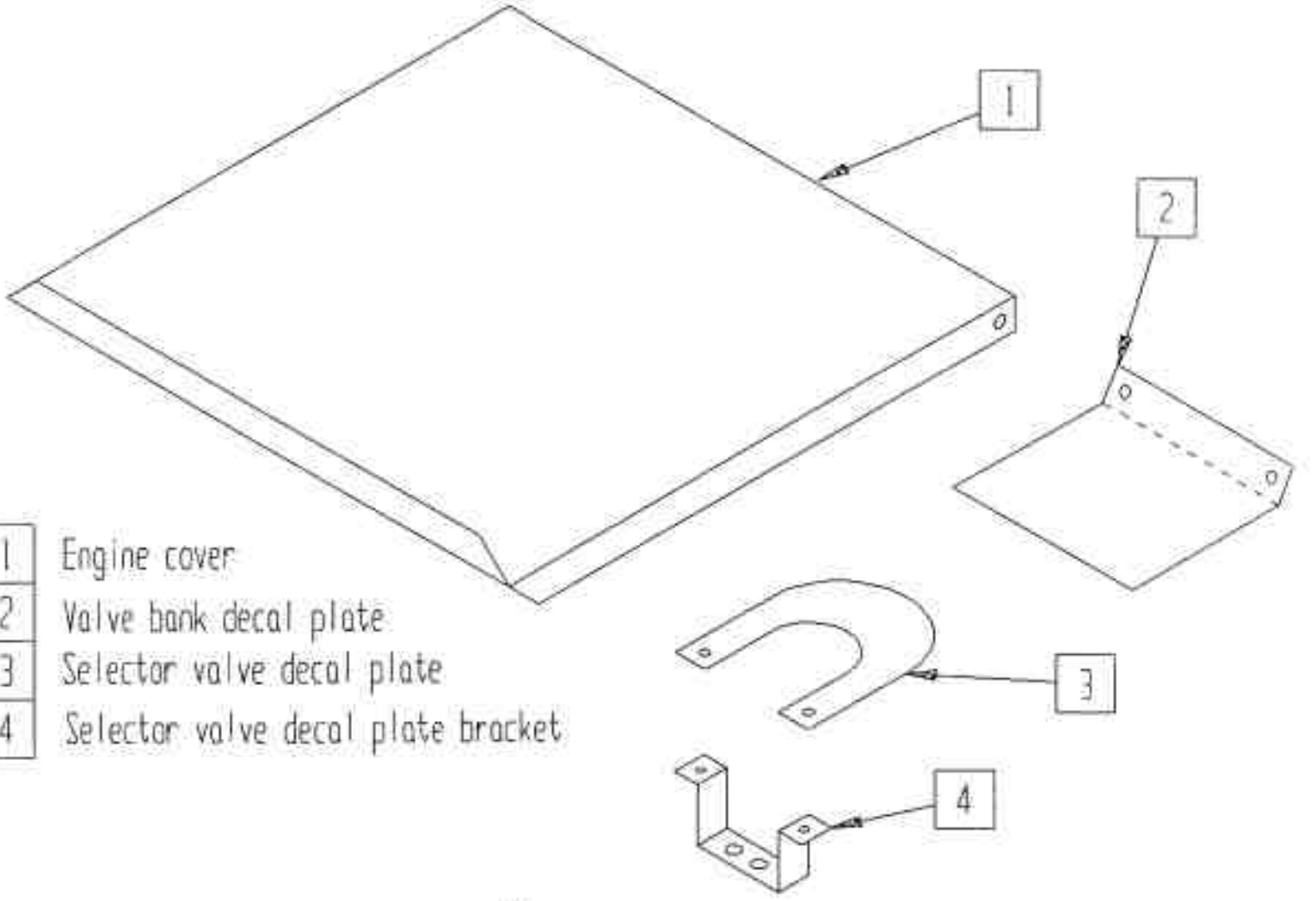


1	13 Hp HONDA Engine
2	Hydraulic Pump
3	Engine to pump adaptor
4	Love Joy Coupling
5	Coupling spacer
6	Love Joy Coupling engine

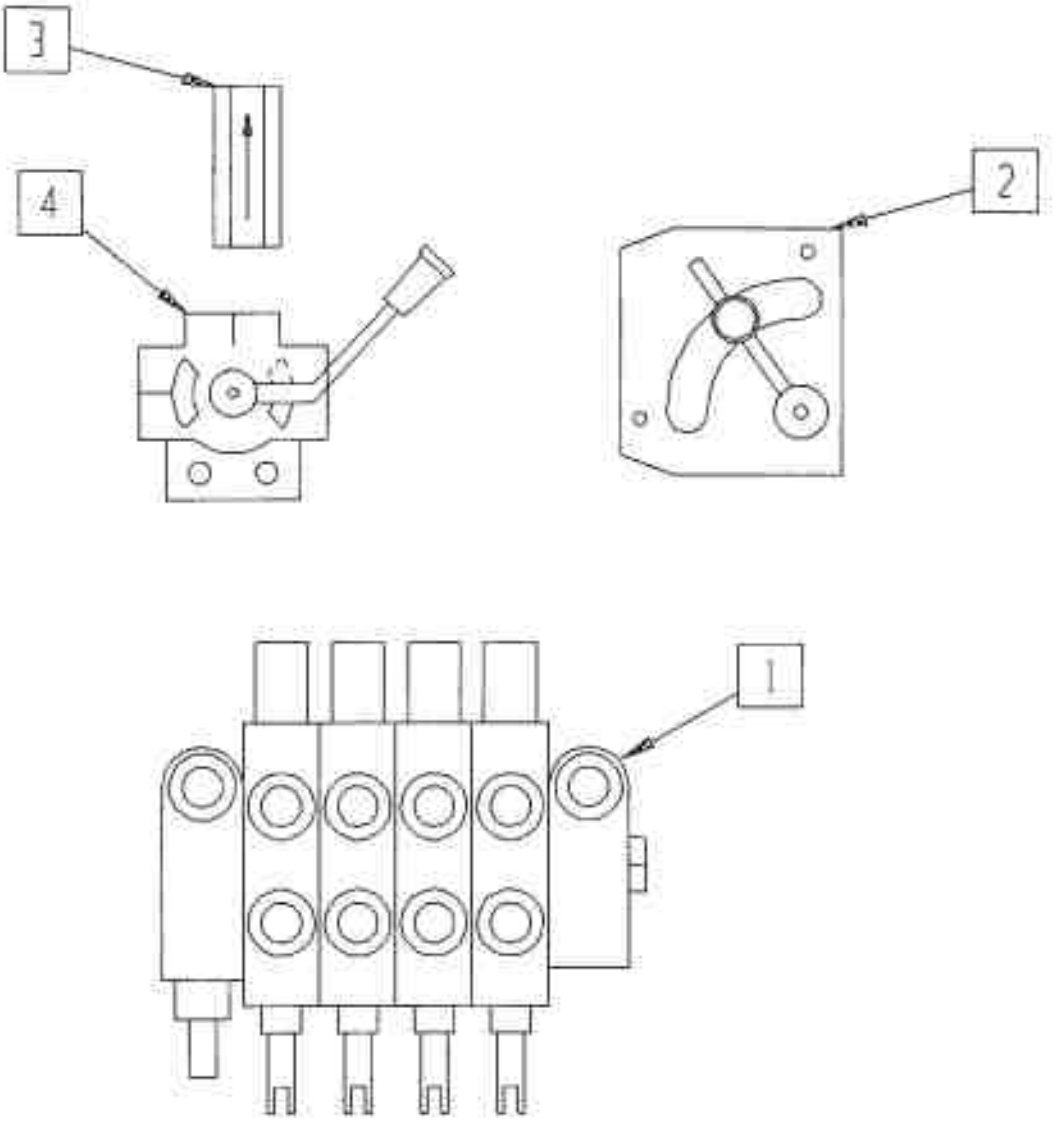
7	4 pc 3/8 X 1 bolt
8	4 pc 3/8 lockwasher
9	2 pc 3/8 1 1/4 bolt
10	2 pc 3/8 lockwasher
11	2 pc 3/8 flatwasher

Tube-Line 5500

Engine cover & decal plate



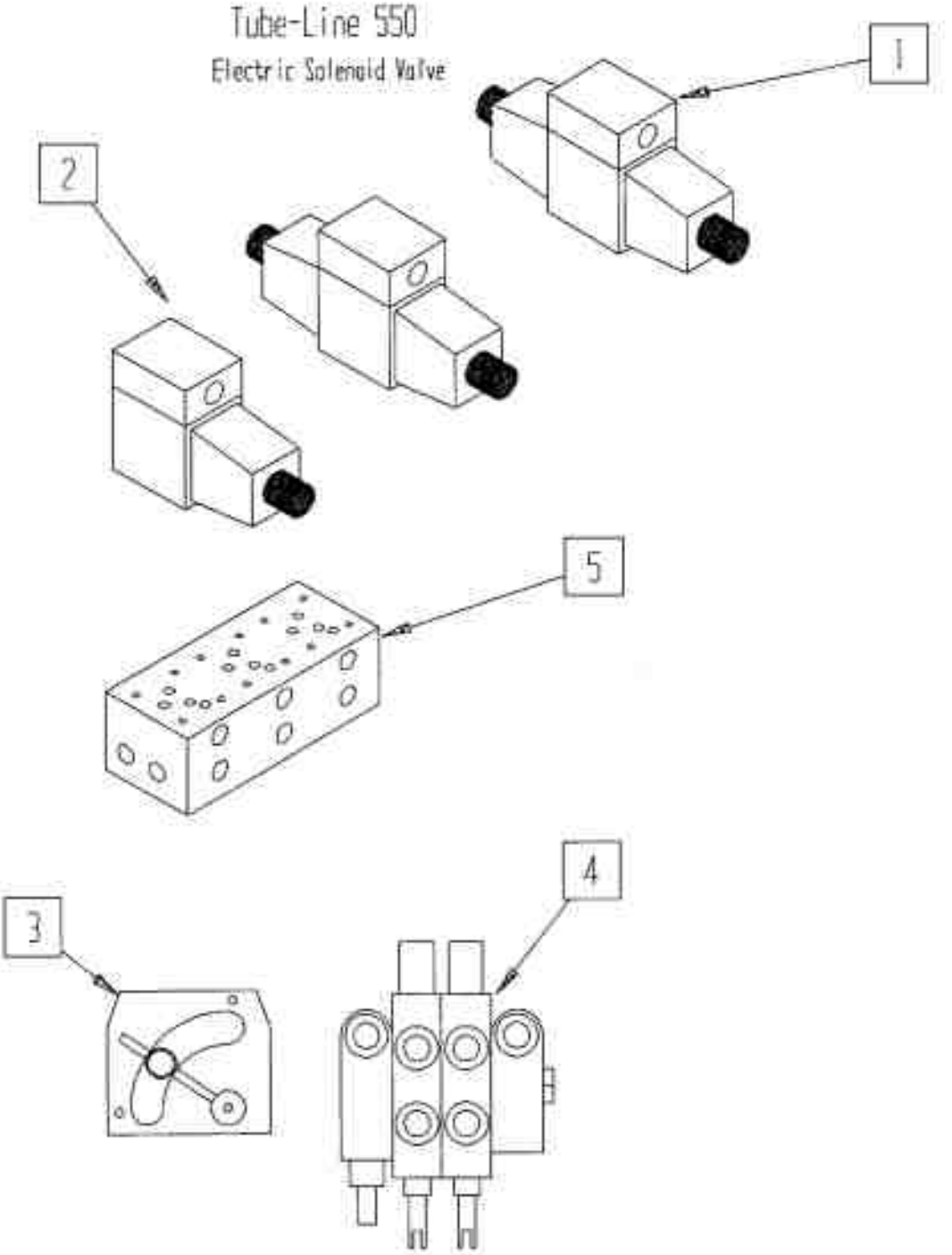
1	Engine cover
2	Valve bank decal plate
3	Selector valve decal plate
4	Selector valve decal plate bracket



1	CPV0014 Valve stack
2	RO - 150 - 08 Flow control
3	1/2 Check valve
4	Selector Valve

Tube-Line 550

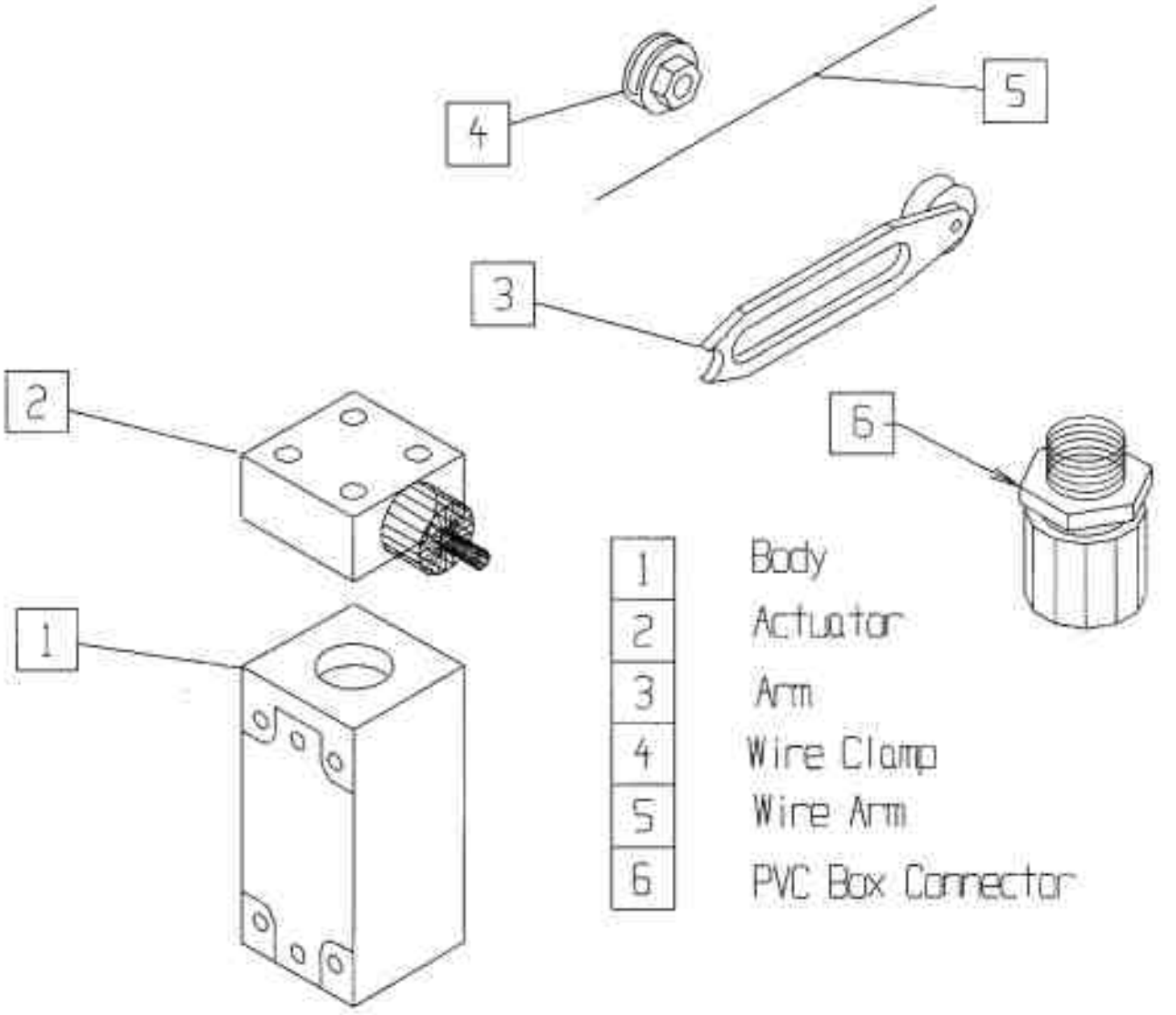
Electric Solenoid Valve



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

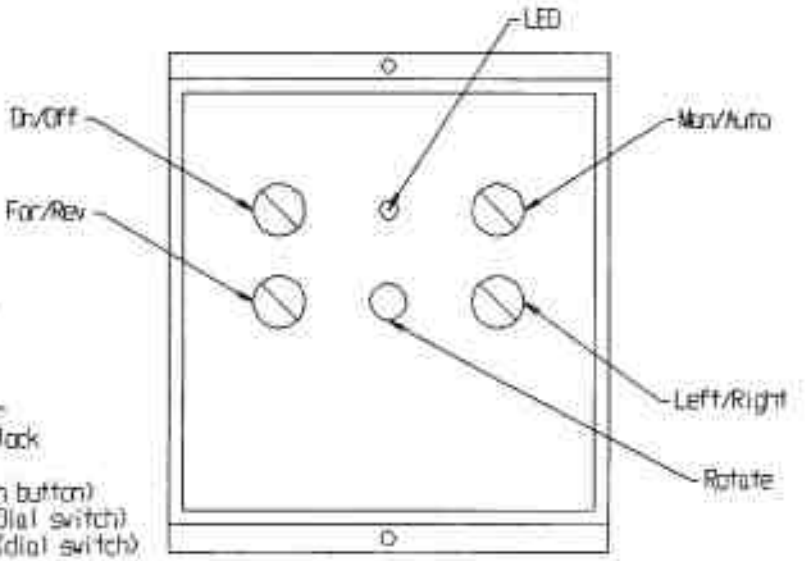
Tube-Line 5500

Limit Switch

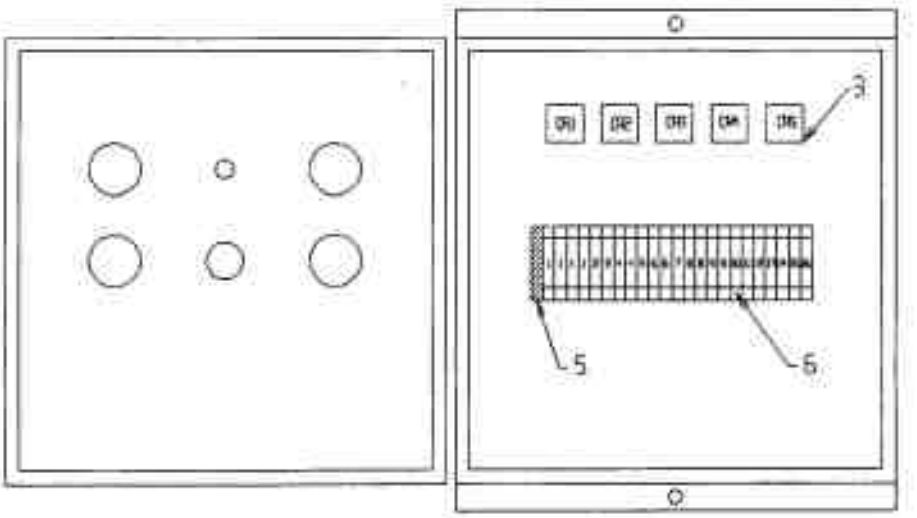


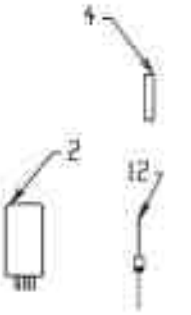
1	Body
2	Actuator
3	Arm
4	Wire Clamp
5	Wire Arm
6	PVC Box Connector

Tube-Line 9500
Control Panel



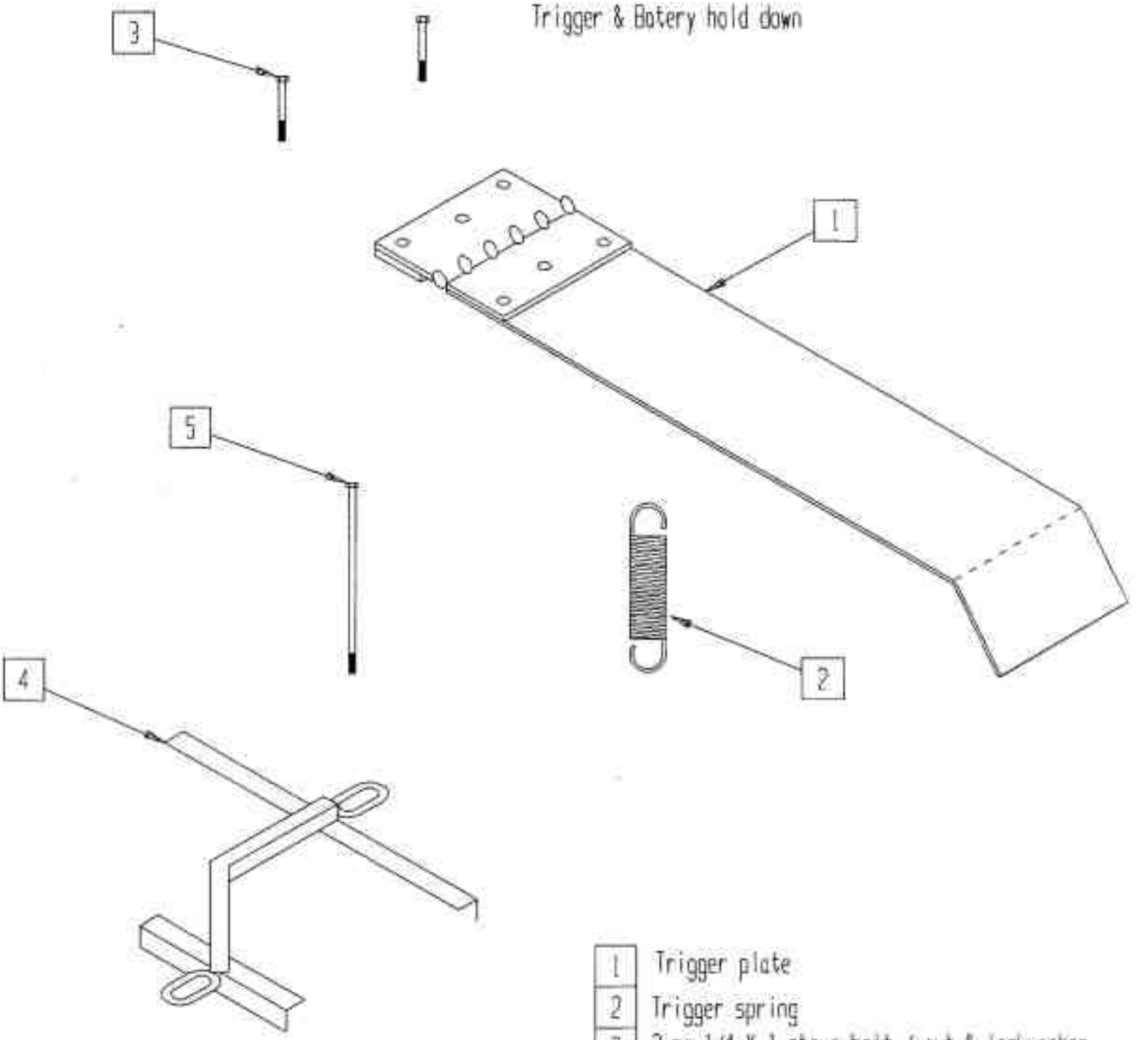
1 - Control Panel Assy.
2 - Control Relay
3 - 11 pin relay base
4 - 15 amp. fuse
5 - Din rail fuse holder
6 - Din rail terminal block
7 - On/Off Switch
8 - Rotate switch (push button)
9 - Man/Auto switch (Dial switch)
10 - Ram and steering (dial switch)
11 - LED
12 - Diode





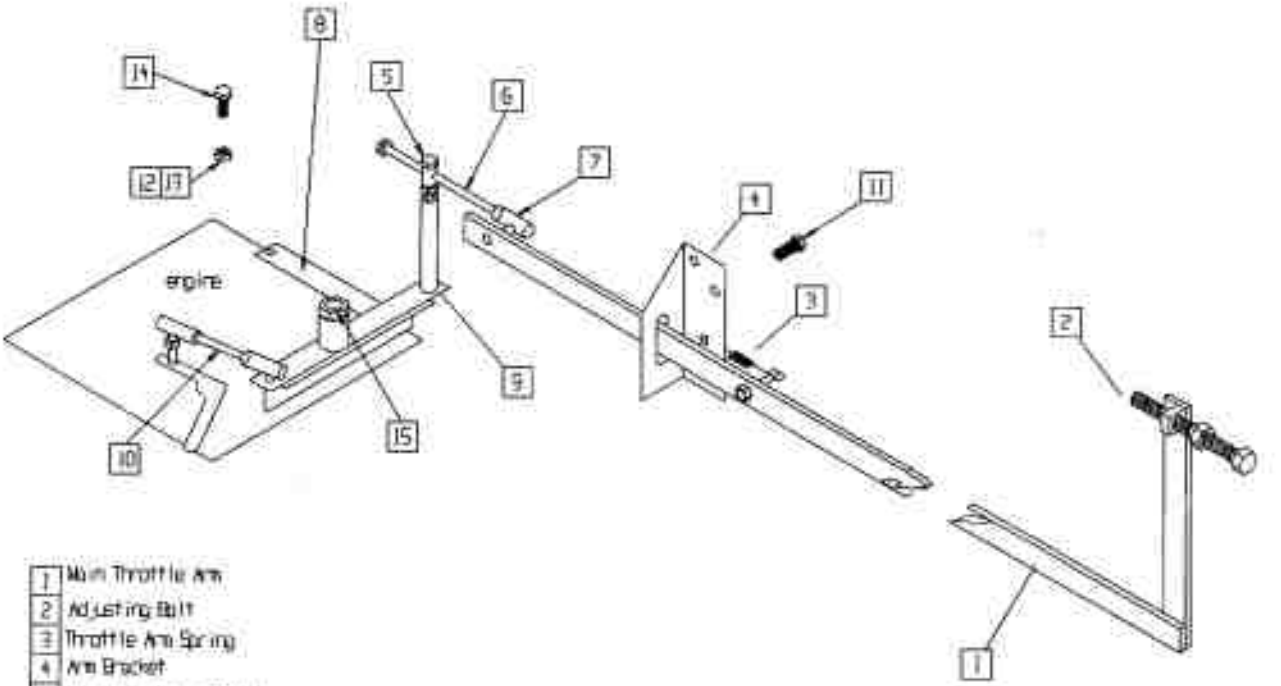
Tube-Line 5500

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 carrage bolt / nut / lockwasher

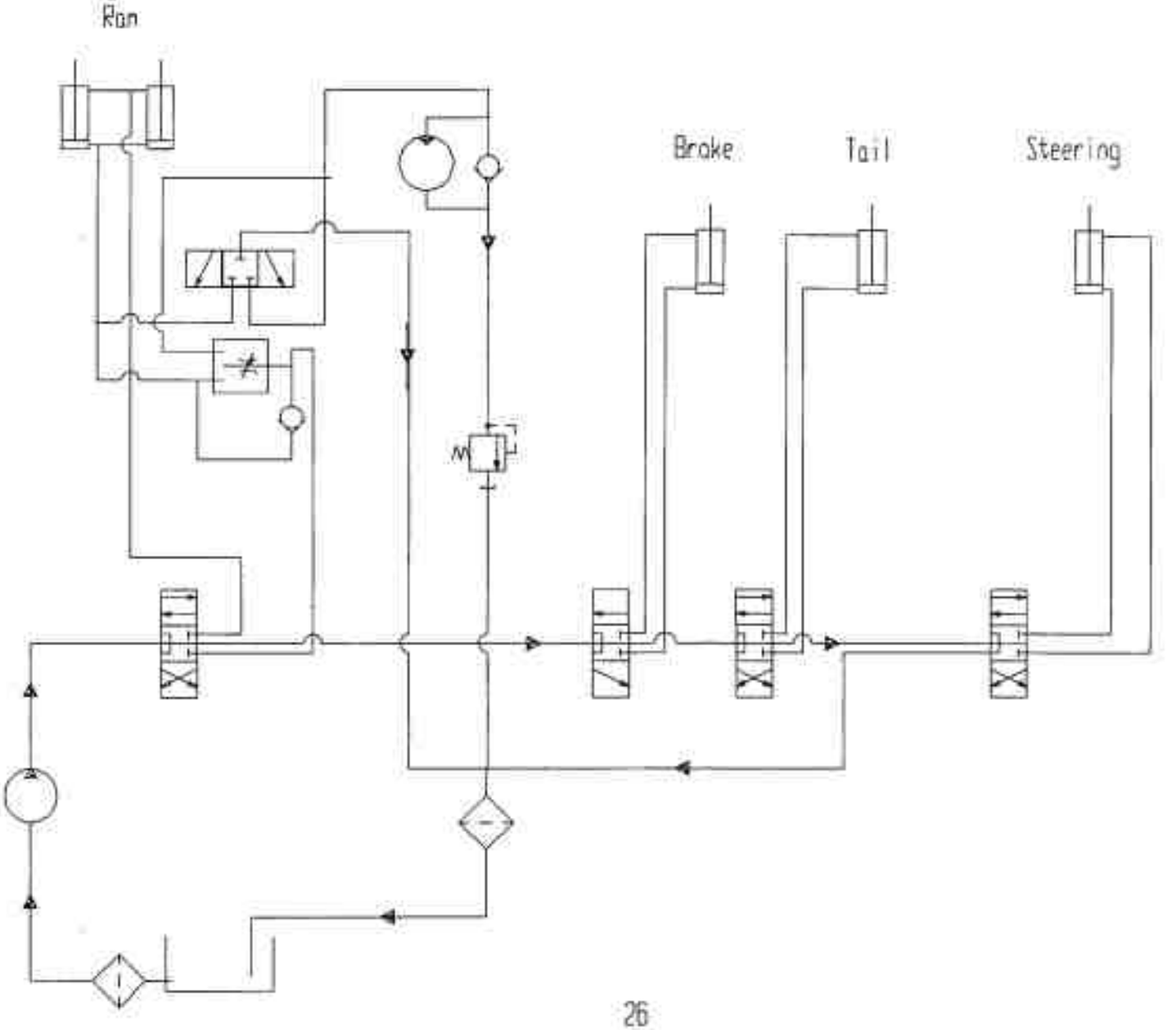
Tubeline 999
Throttle Bracket



1	Main Throttle Arm
2	Adjusting Bolt
3	Throttle Arm Spring
4	Arm Bracket
5	Throttle Linkage Pivot
6	1/4 x 5 UNF Bolt
7	Throttle Ball Joint
8	Engine Bracket
9	Rocker Bar
10	1/4 x 4 UNF Threaded Rod c/w 2 nuts
11	6 pc 5/16 x 1 Bolt
12	9 pc 5/16 Nuts
13	9 pc 5/16 Lockwasher
14	3 pc 5/16 x 1 1/2 Bolt
15	1/2 Locknut

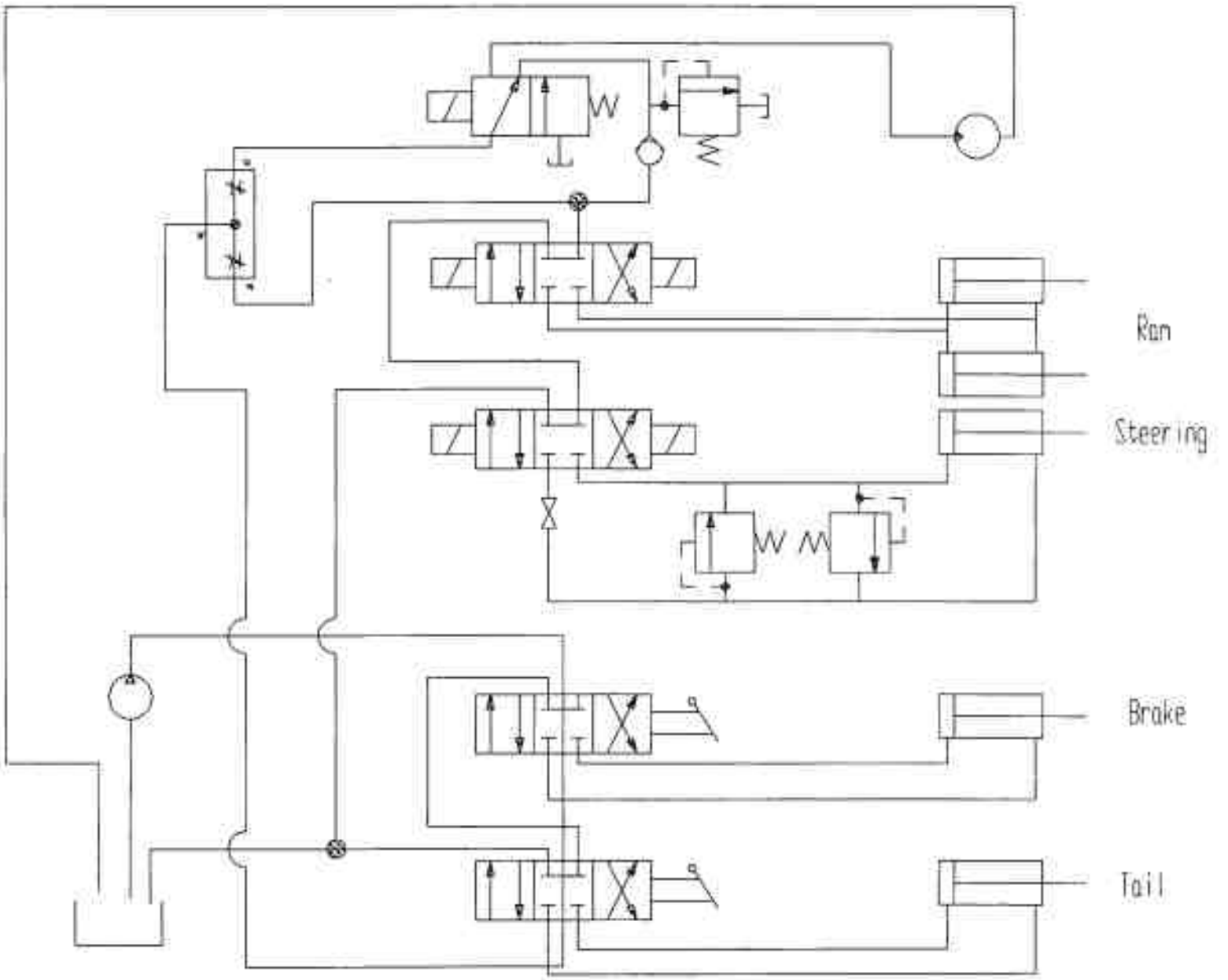
Tube-Line 5500

Manual Hydraulic Schenatic

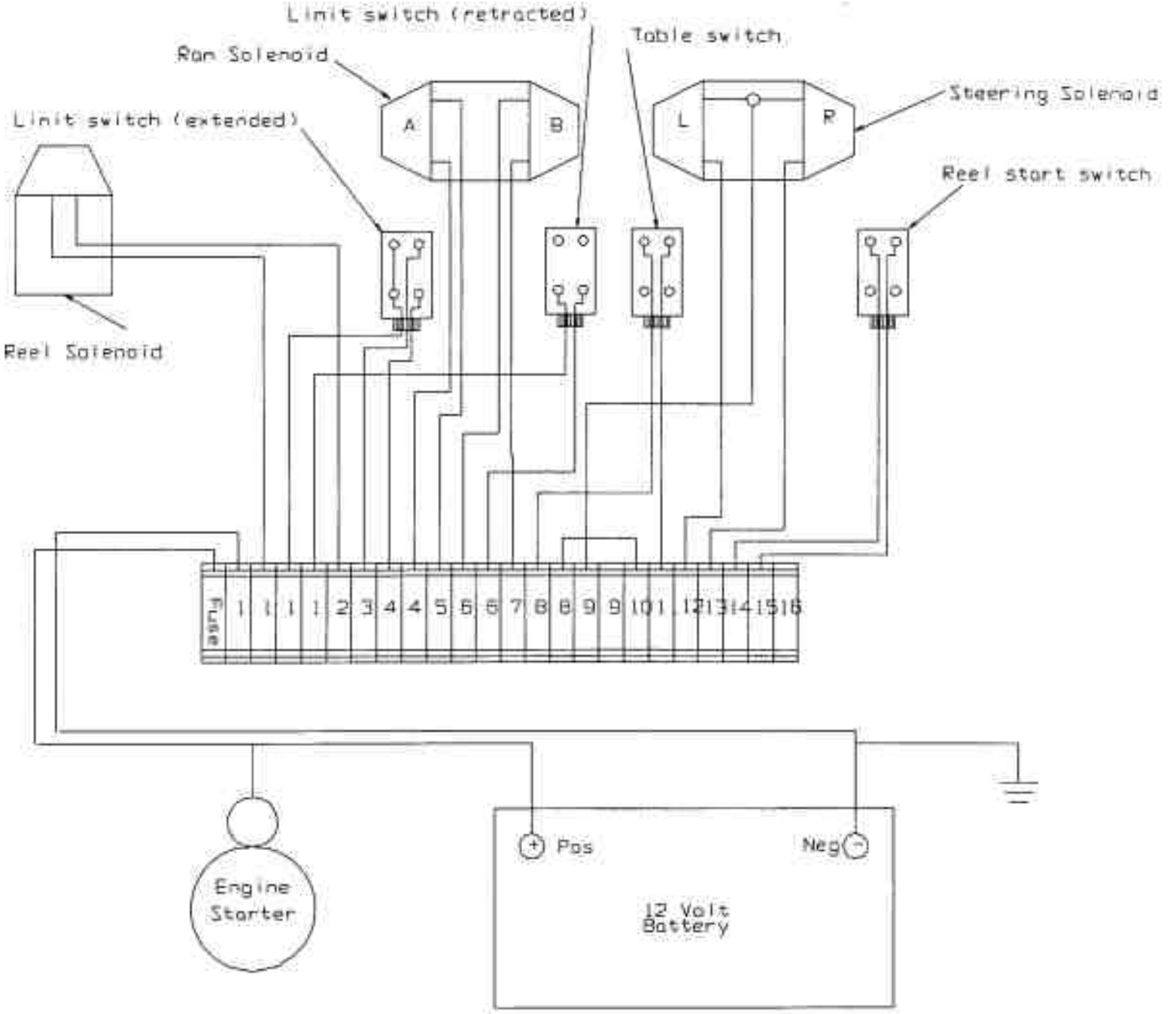


TubeLine 5500A

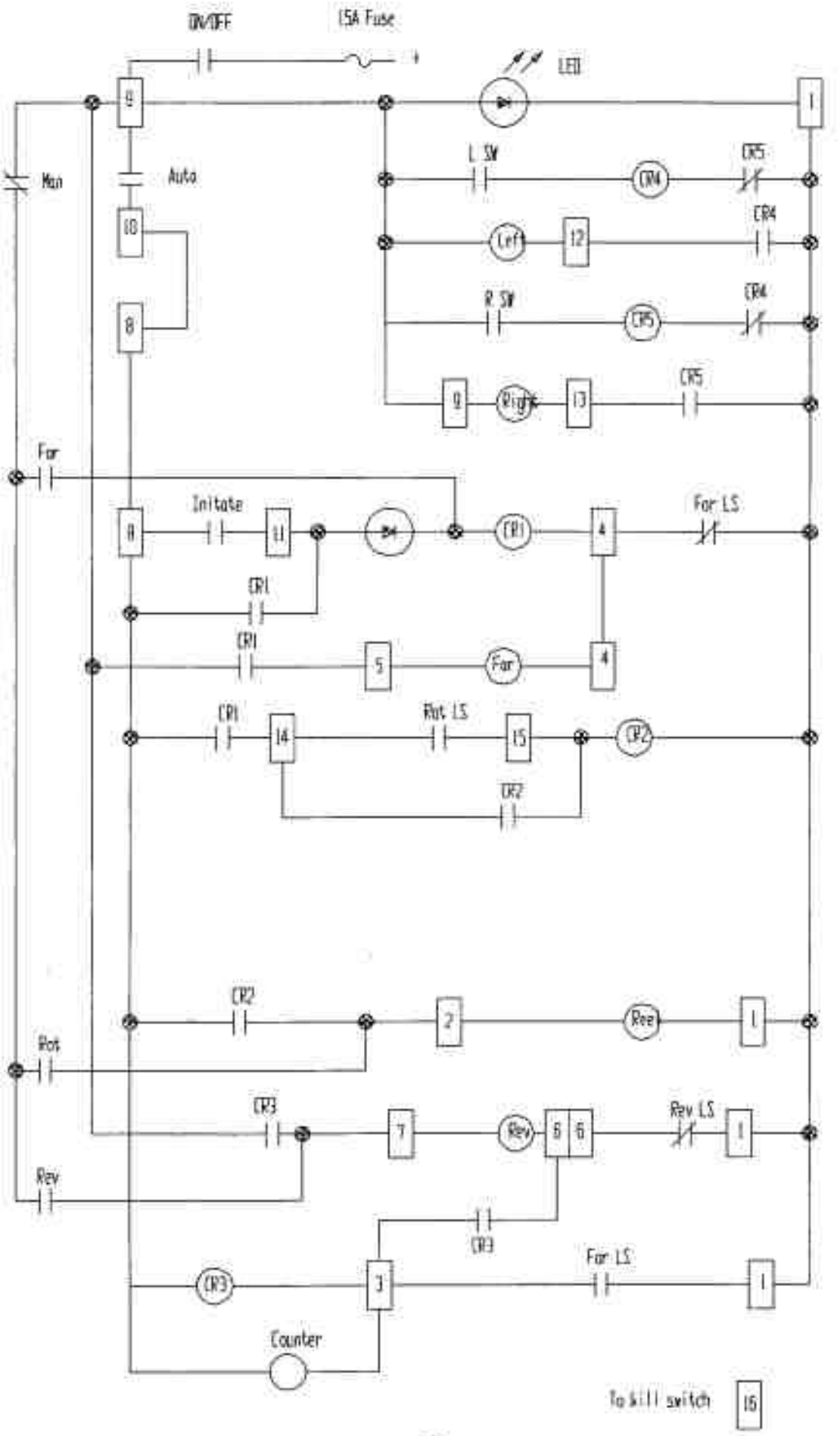
Electric Hydraulic Schematic



TubeLine 5500
Electric Wiring Diagram



Tube-Line 5500
Electric Control Panel Schematic



Fuse block pos. #2 NOT
#1 Neg 12VDC
#1 reel solenoid
#2 reel solenoid
#1 Forward L/S Com
#3 Forward L/S NO
#4 Forward L/S NC
#4 Forward Solenoid
#5 forward solenoid
#1 Reverse L/S NC
#6 Reverse L/S NC
#6 Reverse solenoid
#7 Reverse solenoid
#8 Film sensor L/S
#10 Film sensor L/S
#8 Start (trigger) L/S
#11 Start (trigger) L/S
#9 Steering Solenoid Com.
#12 Steering solenoid Left
#13 Steering solenoid Right
#14 Rotation L/S NO
#15 Rotation L/S
#16 Kill switch

Tube-Line 5500

Manual Hydraulic
Sequence of Operation

1 With valves in neutral position, engine running hydraulic fluid is pumped through valve bank and returned to reservoir.

2 Brakes, tail and steering are standard hydraulic cylinder operation.

3 Wrap cycle – push wrap valve in, detent will hold valve in position, fluid flows from valve through flowcontrol and is split into 2 circuits, one circuit will go to ram cylinders and the other will go to hydraulic motor. These circuits are proportioned with the lever on flowcontrol valve. With the selector valve handle in "Both" position flow will go to cylinder and motor. By changing flowcontrol handle, the 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 back to tank.With handle in ram only position motor fluid will go to tank.

5 Wrap cycle – pull wrap valve out, detent will hold valve in position, fluid will flow from valve port causing cylinder to retract. Fluid from other end of cylinder will return through check valve, at flowcontrol 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 a restrictor valve to keep motor from turning when ram cylinder is retracting.

Tube-Line 5500

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 2 spool valve to flowcontrol, 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 flowcontrol 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. Engine throttle has linkage to slow engine down when ram is all the way to the front. Spring on linkage will speed engine up as soon as Ram cylinder starts to extend.

5 When "Man/Auto" switch is turned to Auto, Push-button switches no longer function. Depress trigger switch located on bale table, Ram hydraulic valve is energized. The ram cylinder will extend and engine will speed up. When ram extends to front slider switch, the switch will energize the single solenoid valve and turning the wrap motor. When ram is extended to the limit switch at the 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

Page #	Ref #	Part #	Qty	Description
1	1	550-100-001	1	Hoop Outer Ring
1	2	550-100-002	1	Hoop Inner Ring
1	3	550-100-003	2	Mounting Bolt 1/2 x 2
1	4	500-100-076	2	1/2 Nut
1	5	500-100-075	2	1/2 Lockwasher
1	6	599-100-003	2	Mounting Bolt 5/8 x 3 1/2
1	7	599-100-004	2	5/6 Nut
1	8	599-100-005	2	5/8 Lockwasher
2	1	500-100-014	8	4" Wheel
2	2	500-100-015	8	Axle Bolt c/w locknut
3	1	550-100-004	2	Main Wrap Bracket
3	1A	550-100-090	2	Main Wrap Side Insert
3	2	550-100-005	4	1-14 UNF Castellated nut
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	550-100-014	4	Locknut
3	12	550-100-015	4	Oilite Bearing
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 Shaft
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
3	23	599-100-006	4	10-24 x 3/4 Machine Bolt
3	24	550-100-091	8	3/8 x 1 # 5 Bolt
3	25	550-100-026	8	3/8 Nylocknut
3		550-100-072		Complete Wrap Assy.

Page #	Ref #	Part #	Qty	Description
4	1	599-100-100	1	Right Hoop Brace
4	2	599-100-101	1	Left Hoop Brace
4	3	599-100-102	1	Right Hoop Post
4	4	599-100-103	1	Left Hoop Post
4	5	599-100-104	2	Switch Adjuster Screw
4	6	599-100-105	1	Automatic Control Panel Mount
4	7	599-100-106	1	Manual Control Panel Mount
4	8	599-100-110	4	1/2 x 4 1/2 Bolt
5	1	599-100-022 R	1	Right Side Safety Door Bracket
5	1	599-100-023 L	1	Left Side Safety Door Bracket
5	2	599-100-024 R	1	Right Safety Door
5	2	599-100-025 L	1	Left Safety Door
5	3	500-100-041	2	Rubber Latch
5	4	500-100-040	2	Pin
5	5	500-100-042	2	Cotter Pin
5	6	500-100-119	6	3/8 x 1 1/4 Bolt
5	7	550-100-026	6	3/8 Locknut
5	8	550-100-027	2	Door Stay
6	1	500-100-049	1	Drive Wheel Base
6	2	500-100-050	1	Hydraulic Motor EATON Char-Lynn 101-1004
6	3	500-100-051	1	Motor Hub
6	4	500-100-052	1	Drive Wheel
6	5	500-100-053	4	1/2 x 3 UNF Bolt
6	6	500-100-054	4	1/2 Wheel Nut
6	7	500-100-055	2	5/8 x 1 1/2 Bolt
6	8	500-100-056	2	5/8 Locknut
6	9	500-100-057	4	3/8 x 3/4 Bolt
6	10	500-100-038	4	3/8 Lockwasher
6	11	500-100-059	1	Check Valve (manual model only)
6	12	500-100-060	1	Washer
6	13	500-100-061	1	1/4 x 1 Bolt & Lockwasher
6	14	500-101-222	1	Relief Valve (manual model only)
6	15	500-101-231	1	Wheel Tensioner Spring
6	16	500-101-232	1	Spring Tensioner Bolt
6	17	500-100-076	2	1/2 Nut
6	18	550-100-090	1	Base Bracket
6	19	599-100-031	4	3/8 x 1 1/2 bolt

Page #	Ref #	Part #	Qty	Description
7	1	500-100-063	2	Inner Seal
7	2	500-100-064	2	Inner Bearing
7	3	500-100-065	2	Inner Bearing Race
7	4	500-100-066	2	Hub
7	5	500-100-067	2	Outer Bearing Race
7	6	500-100-068	2	Outer Bearing
7	7	500-100-069	2	Flatwasher
7	8	500-100-070	2	Castellated Nut
7	9	500-100-071	2	Cotter Pin
7	10	500-100-072	10	Wheel Stud
7	11	500-100-073	2	Dust Cap
8	1	550-100-028	1	Brake Rocker Tube
8	2	550-100-029	2	Brake Eccentric
8	3	500-100-113	2	1/2 x 3 1/2 Bolt
8	4	500-100-075	2	1/2 Lockwasher
8	5	500-100-076	2	1/2 Nut
8	6	500-100-082	1	2 1/2 x 8 Hydraulic Cylinder
9	1	500-100-086	5	Large Roller
9	2	599-100-007	1	Riser Frame
9	3	550-100-050	2	Lock Pin
9	4	550-100-030	10	1" Bearing
9	5	599-100-031	20	3/8 x 1 1/2 Bolt
9	6	500-100-038	20	3/8 Lockwasher
9	7	500-100-190	20	3/8 Flatwasher
10	1	550-100-033	1	Tail Base
10	2	500-100-086	4	Large Roller
10	3	500-100-099	1	4" Roller
10	4	550-100-091	2	3" Roller
10	5	550-100-092	4	3/4" Tube End Nylatron Bearing
10	6	550-100-030	10	1" Bearing
10	7	599-100-107	1	3 x 12 Hydraulic Cylinder
10	8	599-100-035	1	Tail Tiebar
10	9	599-100-031	16	3/8 x 1 1/2 Bolt
10	10	550-100-036	4	5/16 x 1 Self Tapping Bolt
10	11	550-100-037	4	5/16 x 1 1/2 Flathead Bolt
10	12	599-100-008	2	1 x 3 1/2 Bolt
10	13	599-100-009	2	1" Nylocknut
10	14	550-100-093	2	First small roller bracket
10	15	550-100-094	2	Last small roller bracket

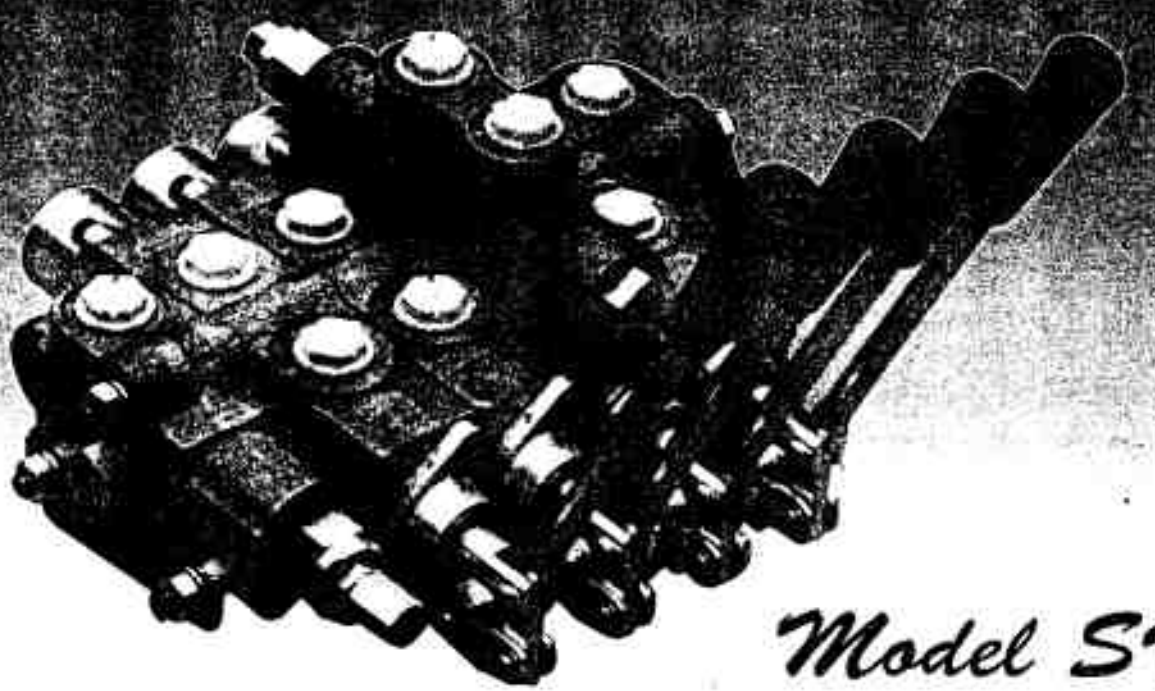
Page #	Ref #	Part #	Qty	Description
11	1	550-100-038 R	1	Bale Saddle Right Side
11	2	550-100-039 L	1	Bale Saddle Left Side
11	3	500-100-125	8	1/2 x 1 1/4 Bolt
11	4	500-100-114	4	1/2 Locknut
11	5	500-100-076	4	1/2 Nut
11	6	500-100-075	4	1/2 Lockwasher
12	1	599-100-040	1	Ram
12	2	550-100-041	2	Ram Guide
12	3	550-100-042	4	Cylinder Pin
12	4	550-100-043	2	Hydraulic Cylinder
12	5	550-100-044	2	3/4 x 2 Bolt
12	6	550-100-045	2	3/4 Lockwasher
12	7	550-100-046	2	3/4 Flatwasher
12	8	500-100-145	2	Grease Fitting
12	9	500-100-139	2	1/2 x 4 Bolt
12	10	500-100-076	2	1/2 Nut
12	11	500-100-075	2	1/2 Lockwasher
12	12	599-100-109	4	1/2 x 2 x 2 HMWPVC
12	13	599-100-010	4	Slider Retainer
12	14	599-100-011	8	1/4 x 1/2 Hex Socket Bolt
13	1	599-100-012	1	Push Off Left Front Arm
13	2	599-100-013	1	Push Off Right Front Arm
13	3	599-100-014	1	Push Off Left Rear Arm
13	4	599-100-015	1	Push Off Right Rear Arm
13	5	599-100-016	1	Push Plate
13	6	599-100-017	2	X Bar
13	7	599-100-018	4	3/4 x 5 Hinge Bolt
13	8	599-100-019	4	3/4 Nylocknut
13	9	599-100-020	4	3/16 Lynch Pin
14	1	599-100-047	1	Right Side Push Channel
14	2	599-100-048	1	Left Side Push Channel
14	3	550-100-050	3	Lock Pin
14	4	550-100-048	1	Push Off Tube

Page #	Ref #	Part #	Qty	Description
15	1	550-100-051	1	Main Tongue
15	2	550-100-052	1	Swinging Tongue
15	3	550-100-053	1	Sliding Tongue
15	4	500-100-151	1	Tongue Latch
15	5	500-100-152	1	7/8 x 8 Bolt
15	6	500-100-153	1	7/8 Locknut
15	7	500-100-154	1	Tongue Pin
15	8	500-100-155	2	5/8 x 5 Bolt
15	9	500-100-056	4	5/8 Locknut
15	10	500-100-157	2	5/8 x 4 1/2 Bolt
15	11	500-100-160	1	Tongue Holder
15	12	500-100-112	1	Hair Pin
15	13	500-100-103	1	2 x 16 Hydraulic Cylinder
16	1	550-100-054	2	Mud Flap
16	2	500-100-164	4	Metal Strip
16	3	500-100-165	12	5/16 x 1 Bolt
16	4	500-100-092	12	5/16 Lockwasher
16	5	500-100-093	12	5/16 Nut
17	1	500-100-168	1	Hydraulic Tank
17	2	500-100-169	1	Breather Cap
17	3	500-100-170	1	Filler Plug 1 1/4 Pipe
17	4	500-100-171	1	Sight Gauge
17	5	500-100-172	1	Filter Base
17	6	500-100-173	1	10 Micron Filter
17	7	500-100-174	1	Magnetic Drain Plug
17	8	500-100-175	1	Suction Filter
17	9	500-100-176	4	3/8 x 1 Bolt
17	10	500-100-038	4	3/8 Lockwasher
17	11	500-100-039	4	3/8 Nut
18	1	500-100-179	1	13 HP Honda Engine (rope start QA)
18	1	500-100-180	1	13 HP Honda Engine (electric start QNE)
18	2	500-100-181	1	Hydraulic Pump Prince # SP20A11A9HR
18	3	500-100-182	1	Engine - Pump Adapter
18	4	500-100-183	1	Love Joy Coupling Pump Side
18	5	500-100-184	1	Coupling Spacer
18	6	500-100-185	1	Love Joy Coupling Engine Side
18	7	500-100-176	4	3/8 x 1 Bolt
18	8	500-100-038	4	3/8 Lockwasher
18	9	500-100-188	2	3/8 x 1 1/4 Bolt
18	10	500-100-038	2	3/8 Lockwasher
18	11	500-100-190	2	3/8 Flatwasher

Page #	Ref #	Part #	Qty	Description
19	1	500-100-196	1	Engine Cover
19	2	500-100-197	1	Valve Stack Decal Plate
19	3	500-100-198	1	Selector Valve Decal Plate
19	4	500-100-199	1	Selector Valve Decal Plate Bracket
20	1	500-100-192	1	Prince # CPV0014
20	2	500-100-193	1	Flow Control Prince RD-150-08
20	3	500-100-194	2	12 Check Valve
20	4	500-100-195	1	Selector Valve
20	5	500-101-222	1	Relief Valve Prince RD18375
21	1	500-100-200	2	Continental Tandem Center 12 VDC VS12M3LGB75L
21	2	500-100-201	1	Continental Single Center 12 VDC VS12M1AGB75L
21	3	500-100-193	1	Flow Control Prince RD-150-08
21	4	550-100-055	1	2 Spool Monoblock Valve c/w Power Beyond
21	5	550-100-056	1	Triple Manifold Block
22	1	550-100-057	1	Limit Switch Body
22	2	550-100-058	1	Limit Switch Actuator
22	3	550-100-059	1	Limit Switch Arm
22	4	550-100-082	1	Limit Switch Wire Clamp
22	5	599-100-049	2	Wire Arm
22	6	550-100-086	12	PVC Box Connector
22		550-100-060	1	Limit Switch Assembly
23	1	550-150-061	1	Control Panel Assy
23	2	500-100-221	5	Control Relay
23	3	500-100-223	5	11 pin Relay Base
23	4	550-100-079	1	15 amp Fuse
23	5	550-150-083	1	Fuse Holder Din rail
23	6	550-150-084	20	Terminal Block Din rail
23	7	550-100-074	1	Panel on/off turn switch Dial Switch
23	8	550-100-075	1	Panel Rotate Push Button Switch
23	9	550-100-076	1	Panel Man/Auto Dial Switch
23	10	550-100-077	2	Panel Ram and Steering Dial Switch
23	11	550-100-078	1	LED (light emitting diode)
23	12	550-150-085	1	Diode
24	1	500-100-208	1	Trigger Plate
24	2	550-100-062	1	Trigger Spring
24	3	500-100-210	2	1/4 x 1 Stove Bolt c/w Nut & Lockwasher
24	4	500-100-211	1	Battery Holdown
24	5	500-100-212	2	5/16 x 7 Bolt c/w Nut & Lockwasher

Page #	Ref #	Part #	Qty	Description
25	1	599-100-063	1	Main Throttle Arm
25	2	599-100-064	1	Adjusting Bolt
25	3	550-100-069	1	Throttle Spring
25	4	599-100-065	3	Arm Bracket
25	5	550-100-067	1	Link Pivot
25	6	599-100-066	1	1/4 x 5 bolt c/w nut
25	7	550-100-065	3	Ball Joint
25	8	599-100-067	1	Engine Bracket
25	9	599-100-068	1	Rocker Bar
25	10	599-100-069	1	1/4 x 4 UNF Threaded Rod c/w 2 nut
25	11	500-100-165	6	5/16 x 1 Bolt
25	12	500-100-093	9	5/16 Nut
25	13	500-100-092	9	5/16 Lockwasher
25	14	599-100-070	3	5/16 x 1 1/2 Bolt
25	15	500-100-114	1	1/2 Locknut
25		550-100-073		Mechanical Throttle Kit

Directional Control Valves



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 Pressure .....3000 psi
Maximum Tank Pressure .....500 psi

Nominal Flow Rating .....12 GPM
Refer to Pressure Drop Curves.

Recommended Filtration .....**10 Micron**

Foot Mounting

Maximum Operating Temp. .....180°F

Weight Per Section

Inlet Section .....Approx 3.75 lbs.
Outlet Section .....Approx 3.75 lbs.
Work Section (Standard) .....Approx 5.50 lbs.
Work Section (High) .....Approx 8.00 lbs.

ORDERING INFORMATION:
The following is a list of valve sections available from stock on a standard basis.

STANDARD SECTIONS AVAILABLE:

INLET SECTIONS ALL HAVE BOTH TOP AND SIDE INLET PORTS

PART NO.	RELIEF TYPE AND SETTING	PORT SIZE
SVI21	No Relief	#10 SAE ORB (7/8-14 THD)
SVI24	Adjustable Low Pressure Relief Set at 1000 PSI	#10 SAE ORB (7/8-14 THD)
SVI15	Adjustable High Pressure Relief Set At 2000 PSI	#8 SAE ORB (3/4-16 THD)
SVI25	Adjustable High Pressure Relief Set at 2000 PSI	#10 SAE ORB (7/8-14 THD)

INLET SECTIONS ALL HAVE #8 SAE ORB (3/4-16 THD) PORTS, LOAD CHECK AND STANDARD LEVER HANDLE

PART NO.	SPOOL TYPE AND ACTION
SVW1AA1	3-Way Single Acting w/ Spring Center
SVW1BA1	4-Way Double Acting w/ Spring Center (Work Ports Blocked in Neutral)
SVW1BB1	4-Way Double Acting w/ 3 Position Detent (Work Ports Blocked in Neutral)
SVW1CA1	4-Way Motor Spool w/ Spring Center (Work Ports Open to Tank in Neutral
SVW1CB1	4-Way Motor Spool w/ 3 Position Detent (Work Ports Open to Tank in Neutral)
SVW1DD1	4-Way 4 Position Float w/ Spring Center and Float Detent
SVL1CA1	4-Way Spool w/ Spring Center (with Pilot Operated Checks on Both Work Ports)
SVM1ES1	4-Way Meter Spool w/ Spring Center (Work Ports Blocked in Neutral)

PORT RELIEF WORK SECTIONS ALL HAVE #8 SAE ORB (3/4-16 THD) PORTS, LOAD CHECK AND STANDARD LEVER HANDLE. MODELS WITH RELIEF FACTORY SET AT 2000 PSI AT 3 GPM

PART NO.	SPOOL TYPE AND ACTION	PORT RELIEFS
SVH1BA1AA	4-Way Double Acting w/ Spring Center	Port Relief Plugged
SVH1BA1GG	4-Way Double Acting w/ Spring Center	Adjustable 1500-3000 PSI
SVH1DD1AA	4-Way 4 Position Float w/ Spring Center and Float Detent	Port Relief Plugged
SVH1DD1BB	4-Way 4 Position Float w/ Spring Center and Float Detent	Shim Adjustable 1500-3000 PSI
SVR1ES1AA	4-Way Meter Spool w/ Spring Center	Port Relief Plugged
SVR1ES1GG	4-Way Meter Spool w/ Spring Center	Adjustable 1500-3000 PSI
SVR1GA1GG	4-Way Double Acting Series w/ Spring Center	Adjustable 1500-3000 PSI
SVS1GA1AA	4-Way Double Acting Series w/ Spring Center	Port Relief Plugged

OUTLET SECTIONS ALL HAVE BOTH TOP AND SIDE INLET PORTS

PART NO.	RELIEF TYPE AND SETTING	PORT SIZE
SVE11	Open Center Outlet w/ Conversion Plug	#8 SAE ORB (3/4-16 THD)
SVE21	Open Center Outlet w/ Conversion Plug	#10 SAE ORB (7/8-14 THD)
SVE22	Power Beyond Outlet w/ #8 SAE Beyond Port	#10 SAE ORB (7/8-14 THD)
SVE23	Closed Center Outlet	#10 SAE ORB (7/8-14 THD)
SVE26	Open Center Outlet Pressure Build-up Valve	#10 SAE ORB (7/8-14 THD)
SVE27	Power Beyond Pressure Build-up Valve	#10 SAE ORB (7/8-14 THD)

TIE ROD KITS

TIE ROD TORQUE
150 in-lbs ±6 in-lbs
(12 1/2 ft-lbs ±1/2)

PART NO.	
660401001	1 Section*
660401002	2 Sections*
660401003	3 Sections*
660401004	4 Sections*
660401005	5 Sections*

*Number of Work Sections

PART NO.	
660401006	6 Sections*
660401007	7 Sections*
660401008	8 Sections*
660401009	9 Sections*
660401010	10 Sections*

SPECIAL INLET AND OUTLET SECTIONS AVAILABLE:

Sections other than standard models listed can be made to order. Use the order code matrix below to generate a model number that meets your requirements. If you prefer, contact your Sales Representative with your special requirements and a model number will be assigned for you. This model number can be used for future orders. A minimum order quantity will apply to special valves. Please consult Sales Representative.

INLET SECTIONS

SVI**XX**–XXXX

All inlet sections have top and side inlets.

PORT SIZE
1. #8 SAE ORB (3/4-16 THD)
2. #10 SAE ORB (7/8-14 THD)

RELIEF OPTION
1. No Relief
2. Adj. Low Pressure 500-1500 PSI
5. Adj. High Pressure 1500-3000 PSI
6. Plastic Plug in relief cavity. Use only when cartridge is to be installed at a later date.

OUTLET SECTION

SVE**XX**

All outlet sections have top and side outlets.

PORT SIZE
1. #8 SAE ORB (3/4-16 THD)
2. #10 SAE ORB (7/8-14 THD)

EXHAUST OPTION
1. Std. Open Center Outlet w/Conversion Plug
2. Power Beyond Outlet w/#8 SAE Beyond Port
3. Closed Center Outlet
6. Open Center Outlet Pressure Build-up
7. Power Beyond Pressure Build-up #8 SAE Beyond Port

VALVE ASSEMBLIES

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

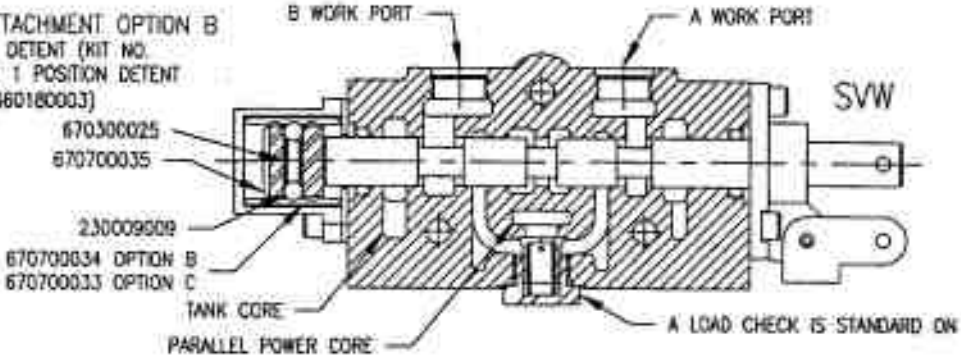
ASSEMBLY MODEL NUMBER SVA-XXXX

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. Please use quotation sheet at the end of SV section.

PRINCE MANUFACTURING CORPORATION • P.O. BOX 7000 • NORTH SIOUX CITY, SOUTH DAKOTA 57049-7000
URL: www.princehyd.com • E-MAIL: prince@pionet.net • PHONE (712) 277-4061 • FAX (712) 277-8538

WORK SECTIONS

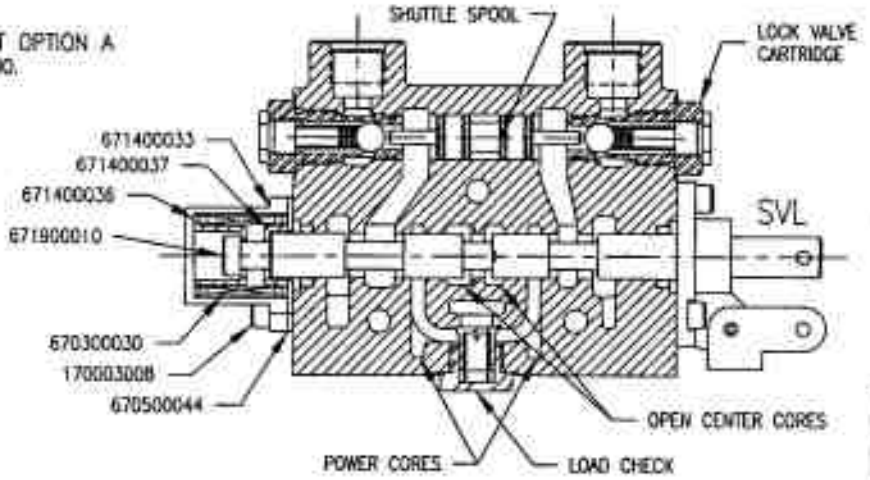
SPOOL ATTACHMENT OPTION B
3 POSITION DETENT (KIT NO. 660180002, 1 POSITION DETENT OPTION C 660180003)



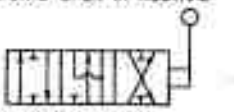
OPTION B
DOUBLE ACTING WORK PORTS BLOCKED IN NEUTRAL

4 WAY 3 POSITION

SPOOL ATTACHMENT OPTION A
SPRING CENTER (KIT NO. 660180001)

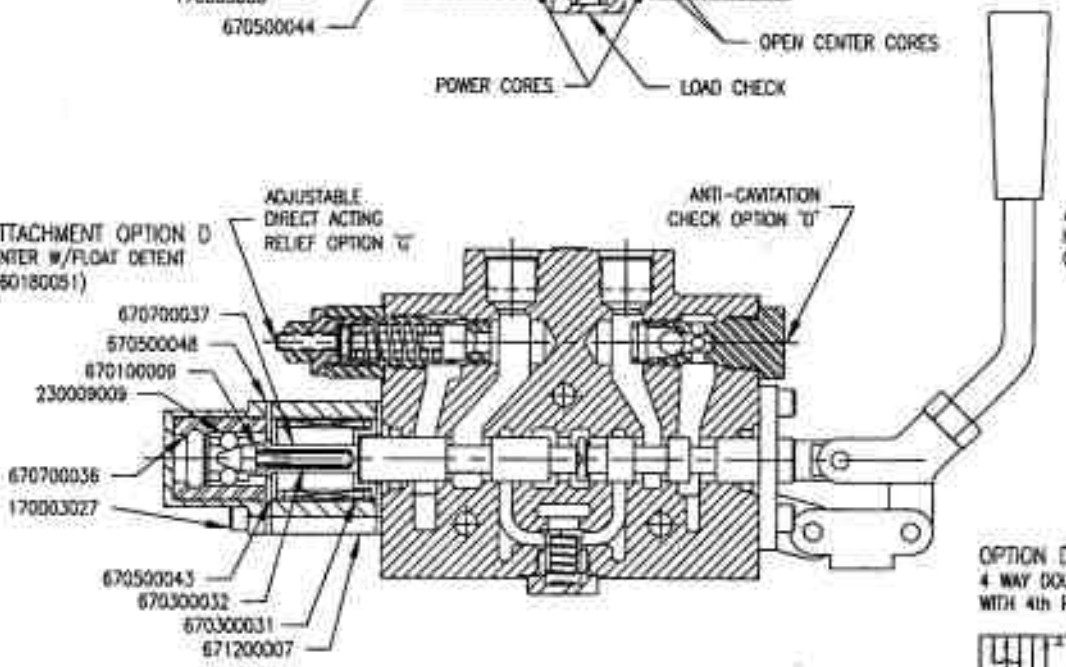


OPTION C
DOUBLE ACTING WORK PORTS OPEN IN NEUTRAL

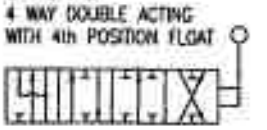


4 WAY 3 POSITION MOTOR

SPOOL ATTACHMENT OPTION D
SPRING CENTER W/FLOAT DETENT (KIT NO. 660180051)

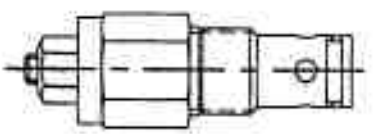


OPTION D
4 WAY DOUBLE ACTING WITH 4th POSITION FLOAT



SV WORK PORT RELIEF

SV Work Port Reliefs, Option B, C, G, & H, can be ordered pretested. Use order code at right.



PR — 0 — ____ — ____

MODEL NUMBER	PORT SIZE	RELIEF TYPE	PRESSURE SETTING
	0 CARTRIDGE ONLY	H-ADJUSTABLE 1500-3000 PSI L-ADJUSTABLE 500-1500 PSI NH-NON-ADJUSTABLE 1500-3000 PSI NL-NON-ADJUSTABLE 500-1500 PSI	SPECIFY RELIEF PRESSURE LEAVE BLANK FOR STANDARD SETTINGS STANDARD SETTINGS: 2000 PSI for H and NH 1000 PSI for L and NL

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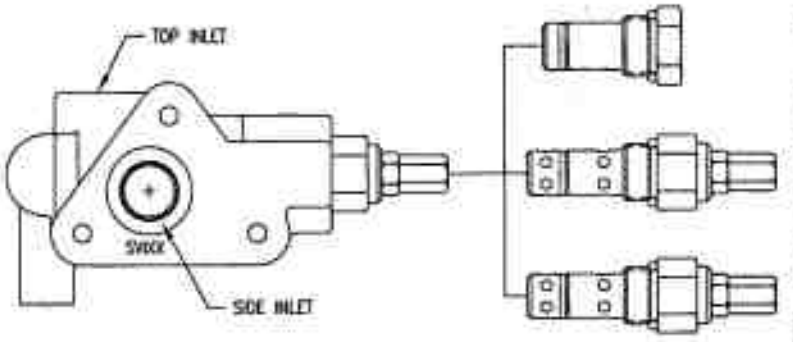
SV INLET RELIEF OPTIONS



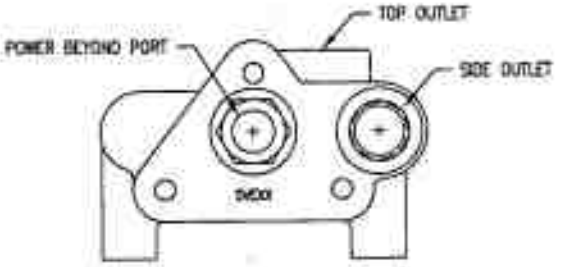
OPTION 1 NO RELIEF
This option provides no built in relief. This is used when a relief is provided elsewhere in the system or in a closed center application. This plug can be replaced with a relief cartridge at a later date.

OPTION 4 LOW PRESSURE ADJUSTABLE RELIEF
This option provides for a differential poppet relief adjustable from 500-1500 PSI. Set at 1000 PSI @ 10 GPM.

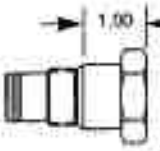
OPTION 5 HIGH PRESSURE ADJUSTABLE RELIEF
This option provides for a differential poppet relief adjustable from 1500-3000 PSI. Set at 2000 PSI @ 10 GPM. The differential poppet relief provides smooth quiet operation with high cracking pressure.

RELIEF CARTRIDGES CAN BE ORDERED PRETESTED SEE RV-OX RELIEF, PAGE 55.

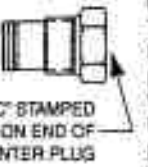
SV OUTLET COVER OPTIONS



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 spools are in neutral the inlet is unloaded to tank.

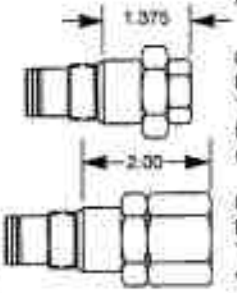


OPTION 2 POWER BEYOND OUTLET WITH #8 SAE BEYOND PORT
This option provides for a high pressure power beyond port. This would be used if a valve is to be added downstream. THE OUTLET PORT MUST STILL BE CONNECTED TO TANK When spools are in neutral the inlet is connected to the power beyond port.



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. Closed center can also be accomplished by plugging the power beyond port of option 2.

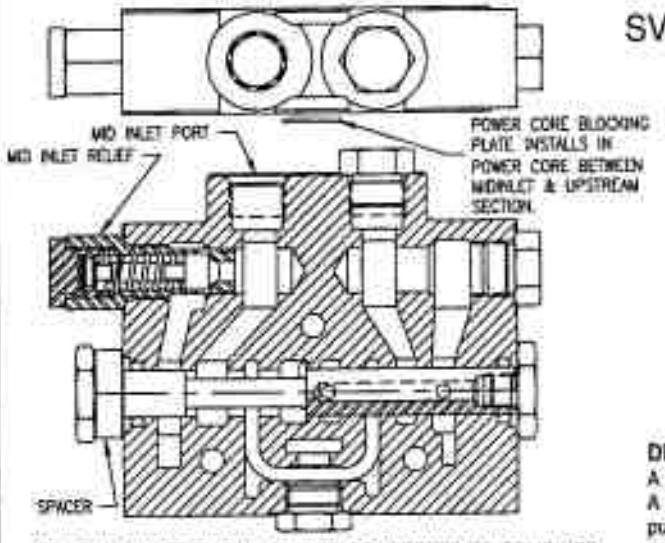
PLEASE NOTE that this closed center option does not provide for the drain off of standby spool leakage. This can allow a very small amount of oil to enter the work ports when in neutral.



OPTION 6 OPEN CENTER OUTLET PRESSURE BUILD-UP VALVE FOR SOLENOID OPTION
This option directs oil from open center core thru pressure build-up valve and then to tank. See solenoid section for description of operation.

OPTION 7 POWER BEYOND PRESSURE BUILD-UP VALVE FOR SOLENOID OPTION
This option directs oil from inlet thru pressure build-up valve and then downstream. This pressure build-up valve provides a #8 SAE power beyond port. The outlet must be connected to tank.

SV MID-INLET SECTION



SPLIT MID-INLET SHOWN CAN BE CONVERTED TO COMBINED MID-INLET BY MOVING SPACER TO OPPOSITE END

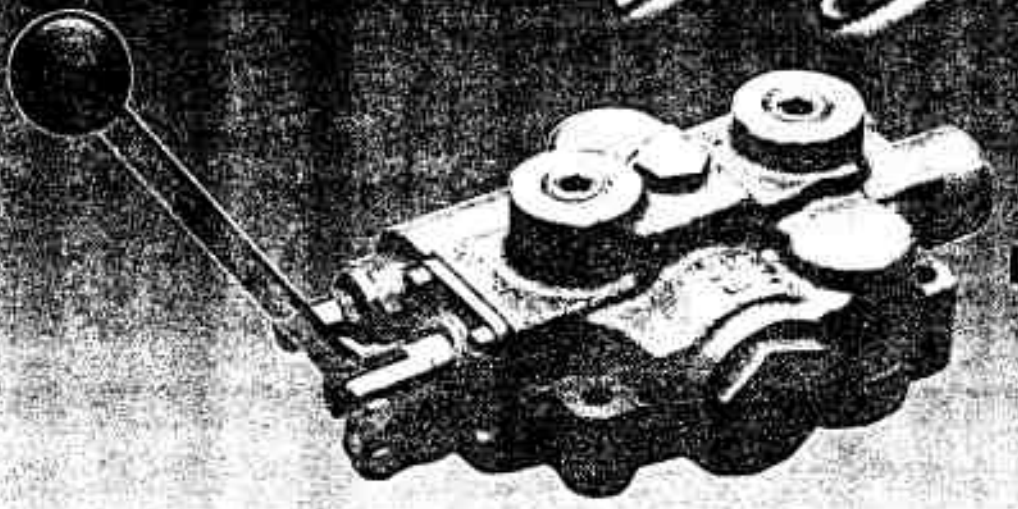
SVIM 1XX–XXXX

- Last Four Digits Specify A Non-Standard Relief Pressure. When blank, refer to standard setting.
- 1-No Relief
  2-SHIM Adjustable 500-1500 PSI Std. Setting 1000 PSI @ 10GPM
  3-SHIM Adjustable 1500-3000 PSI Std. Setting 2000 PSI @ 10 GPM
  4-Adjustable 500-1500 PSI Std. Setting 1000 PSI @ 10 GPM
  5-Adjustable 1500-3000 PSI Std. Setting 2000 PSI @ 10 GPM
- C-Combined Flow Mid-Inlet
  S-Split Flow Mid-Inlet
  See Section View at left. Note Location of Spacer. Part Number 671200035
- 1. Port Size #8 SAE ORB (3/4-16 THD)

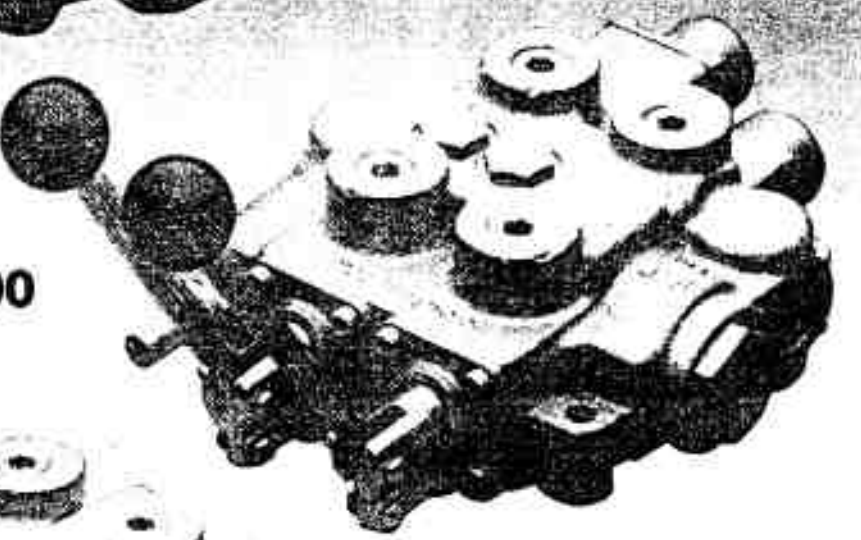
DESCRIPTION:
A Mid-Inlet provides an inlet port for a second pump mid stream in the valve stack. A relief can be provided in this section. With the combined flow the flow from both pumps is available to the downstream sections when all the work sections upstream are in neutral. The split flow completely separates the two pump flows. The common tank passage is all that is shared between the two pump flows.

Model RD5000

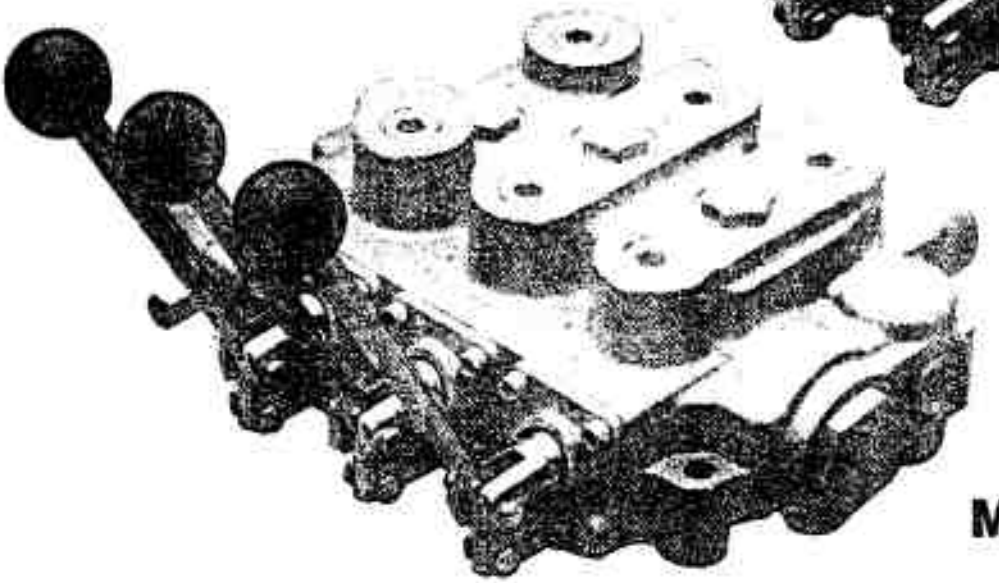
Directional Control Valves
1, 2, and 3 Spool



Model RD5100



Model RD5200



Model RD5300

RD5000 PRESSURE DROP, RELIEF CURVE AND STANDARD FEATURES

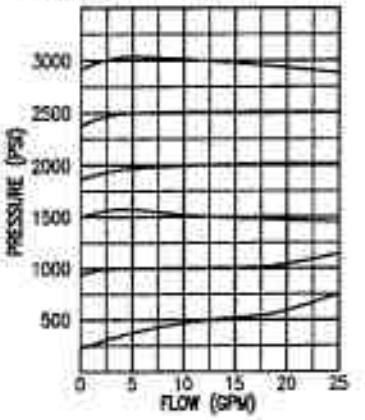
STANDARD FEATURES

- Economical monoblock construction of high tensile strength gray cast iron.
- Load check on each spool.
- Hard chrome plated spool.
- Optional 4 Position Float on 1st spool.
- Differential poppet style relief, adjustable from 1500 to 3000 psi (also available in low pressure version adjustable from 500 to 1500 psi)
- Power beyond and closed center capability.
- Reversible handle.

RD5100 SINGLE SPOOL VALVE PRESSURE DROP VALUES

	110 SUS OIL AT 115°F		
	△P-PSI		
FLOW (GPM)	INLET TO OUTLET	INLET TO A OR B	A OR B TO OUTLET
5	2	8	3
10	5	17	6
15	9	35	12
20	21	58	21
25	26	86	34

RD5000 RELIEF VALVE 110 SUS OIL AT 115°F



SPECIFICATIONS

PARALLEL CIRCUIT (RD-5200 & RD-5300)
MAXIMUM OPERATING PRESSURE ..... 3000 PSI
MAXIMUM OPERATING TEMPERATURE ..... 180°F
MAXIMUM TANK PORT PRESSURE ..... 500 PSI
RECOMMENDED SYSTEM FILTRATION ..... 10 MICRON
FLOW RATING ..... 30 GPM RD5100
25 GPM RD5200
25 GPM RD5300
WEIGHT ..... 14 LBS RD5100
23 LBS RD5200
34 LBS RD5300

RD5200 TWO SPOOL VALVE PRESSURE DROP VALUES

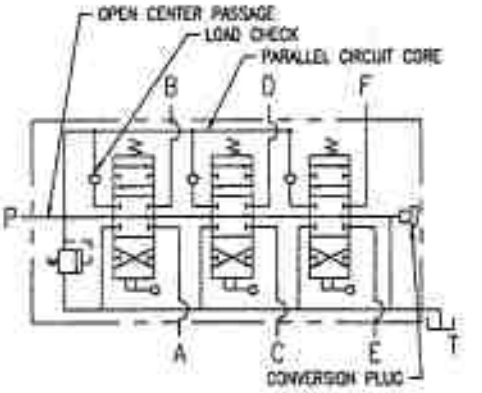
	110 SUS OIL AT 115°F			
	△P-PSI			
FLOW (GPM)	INLET TO OUTLET	INLET TO WORK PORTS	A OR B TO OUTLET	C OR D TO OUTLET
5	3	11	2	2
10	8	22	8	5
15	16	38	15	11
20	28	57	27	19
25	44	83	43	29

PARALLEL CIRCUIT VALVES:

Both the RD-5200 Two-Spool and RD-5300 Three-Spool Valves are parallel circuit valves. When any one of the spools is shifted it blocks off the open center passage thru the valve. The oil then flows into the parallel circuit core making oil available to all spools. If more than one spool is fully shifted then oil will go to the spool with the lowest pressure requirements. However, it is possible to meter the flow to the spool with the least load and power two unequal loads.

RD5300 THREE SPOOL VALVE PRESSURE DROP VALUES

	110 SUS OIL AT 115°F						
	△P-PSI						
FLOW (GPM)	INLET TO OUTLET	INLET TO A OR B	INLET TO C OR D	INLET TO E OR F	A OR B TO OUTLET	C OR D TO OUTLET	E OR F TO OUTLET
5	2	9	9	11	4	3	2
10	10	18	20	25	14	9	6
15	22	33	41	49	32	22	13
20	37	56	68	78	51	36	21
25	58	83	101	118	76	55	32



The above drawing shows a Symbol for a Three-Spool Valve Model Number RD532CCCAAA5A4B1

VALVES

RD5000 ORDERING INFORMATION

STANDARD VALVES AVAILABLE:

All standard valves have end inlet and outlet locations, power beyond conversion plug, complete handle assemblies, and adjustable differential poppet relief.

VALVE PART NUMBER	SPOOL TYPE					IN/OUT PORT SIZE	WORK PORT SIZE		
	1st SPOOL CONFIGURATION			2nd SPOOL CONFIG.	3rd SPOOL CONFIG.				
	FLOAT SPOOL[1]	3 POSITION 4 WAY[2]	3 POSITION 4 WAY DETENTED[3]	3 POSITION 4 WAY[2]	3 POSITION 4 WAY[2]	3/4 NPTF	1/2 NPTF	3/4 NPTF	RELIEF SETTING
RD512GG5A4B1	X					X	X		2000 PSI @ 10 GPM
RD512CA5A4B1		X				X	X		2000 PSI @ 10 GPM
RD513GG5A4B1	X					X		X	2000 PSI @ 10 GPM
RD513CA5A4B1		X				X		X	2000 PSI @ 10 GPM
RD513CB5A4B1			X			X		X	2000 PSI @ 10 GPM
RD522GCGA5A4B1	X			X		X	X		2000 PSI @ 10 GPM
RD522CCAA5A4B1		X		X		X	X		2000 PSI @ 10 GPM
RD532GCCGAA5A4B1	X			X	X	X	X		2000 PSI @ 10 GPM
RD532CCCAAA5A4B1		X		X	X	X	X		2000 PSI @ 10 GPM

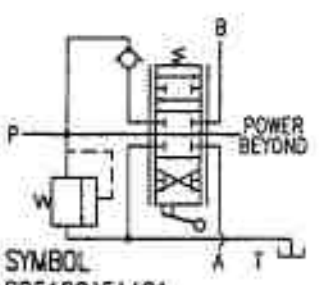
1 Four position, four way, tandem center, detented "in" the float position. Spring center to neutral from work positions. Work ports blocked in neutral.

2 Tandem center. Spring center to neutral from work positions. Work ports blocked in neutral.

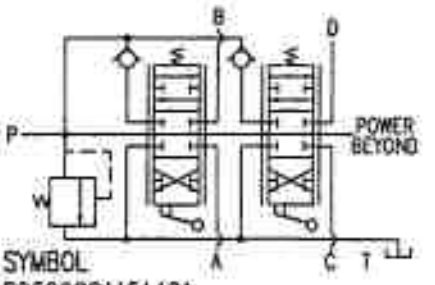
3 Tandem center, 3 position detent. Work ports blocked in neutral.

MISC AND FIELD CONVERSION KITS FOR MODEL RD-5000 VALVES

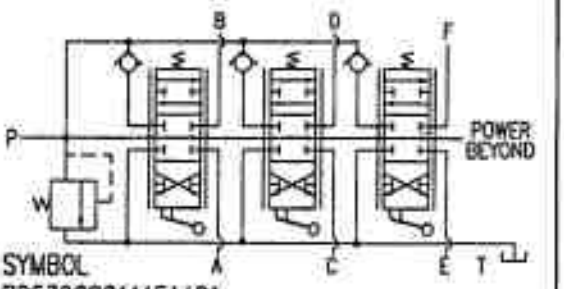
660150001	SPRING CENTER KIT
660150002	3 POSITION DETENT KIT
660150003	FRICTION DETENT KIT
660150018	1 POSITION DETENT SPOOL OUT W/ SPRING CENTER
660150020	2 POSITION DETENT W/ SPRING CENTER KIT
660312003	CONVERSION PLUG
660312004	POWER BEYOND PLUG 3/4 NPTF
660312008	POWER BEYOND PLUG #12 SAE
660250006	NO RELIEF PLUG
660250003	LOW PRESSURE ADJUSTABLE RELIEF CARTRIDGE
660250002	HIGH PRESSURE ADJUSTABLE RELIEF CARTRIDGE
660312005	CLOSED CENTER CONVERSION PLUG
660150015	LOAD CHECK KIT
660150045	SPRING CENTER WITH MICRO-SWITCH KIT
660150004	HANDLE HARDWARE KIT
660350001	HANDLE CLEVIS
660551001	RD5100 SEAL KIT
660552001	RD5200 SEAL KIT
660553001	RD5300 SEAL KIT
660150011	STRAIGHT JOYSTICK HANDLE KIT
660150012	45° BENT JOYSTICK HANDLE PARTS
660150014	FLOAT HARDWARE KIT
660552002	AUTO CYCLE SEAL KIT



SYMBOL RD512CA5A4C1



SYMBOL RD522CCAA5A4C1



SYMBOL RD532CCCAAA5A4C1

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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 to high.

VALVE SPECIFICATIONS:

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

FIELD REPAIR KITS:

Handle hardware kit	660301002
Seal Kit	660501001

STANDARD MODELS AVAILABLE

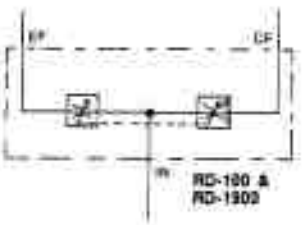
MODEL NUMBER		PORT SIZES	CONTROLLED FLOW RANGE
RD-137-8	RD-1937-8	3/8 NPTF	0-8 GPM
RD-150-8	RD-1950-8	1/2 NPTF	0-8 GPM
RD-150-16	RD-1950-16	1/2 NPTF	0-16 GPM
RD-175-16	RD-1975-16	3/4 NPTF	0-16 GPM
RD-175-30	RD-1975-30	3/4 NPTF	0-30 GPM
RD-108-8	RD-1908-8	#8 SAE	0-8 GPM
RD-112-30	RD-1912-30	#12 SAE	0-30 GPM
RDRS-150-16	RDRS-1950-16	1/2 NPTF	0-16 GPM
RDRS-175-30	RDRS-1975-30	3/4 NPTF	0-30 GPM

For relief settings other than standard
RDRS-150-16-20
RDRS-1950-16-20
Relief Pressure in Hundreds Example: 20=2000 PSI

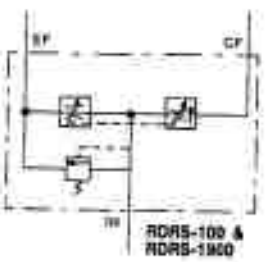
These models have built in relief set at 1500 psi @ 10 GPM.

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

SYMBOL



RD-100 & RD-1900



RDRS-100 & RDRS-1900

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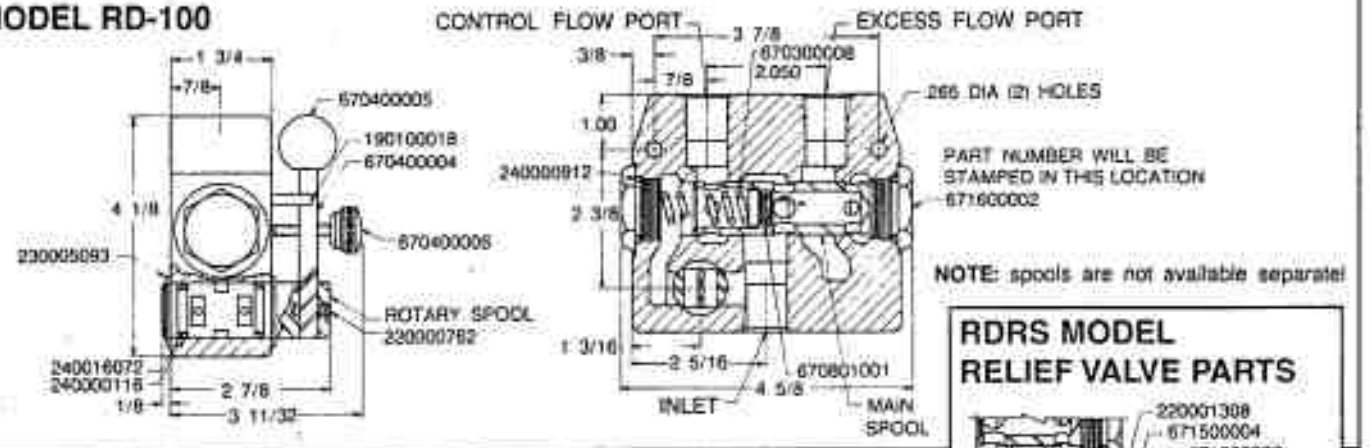
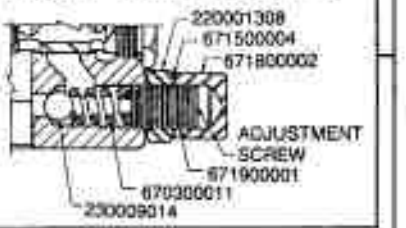
MODEL RD-100 AND RD-1900
PARTS BREAKDOWN AND DIMENSIONS

MODEL RD-100

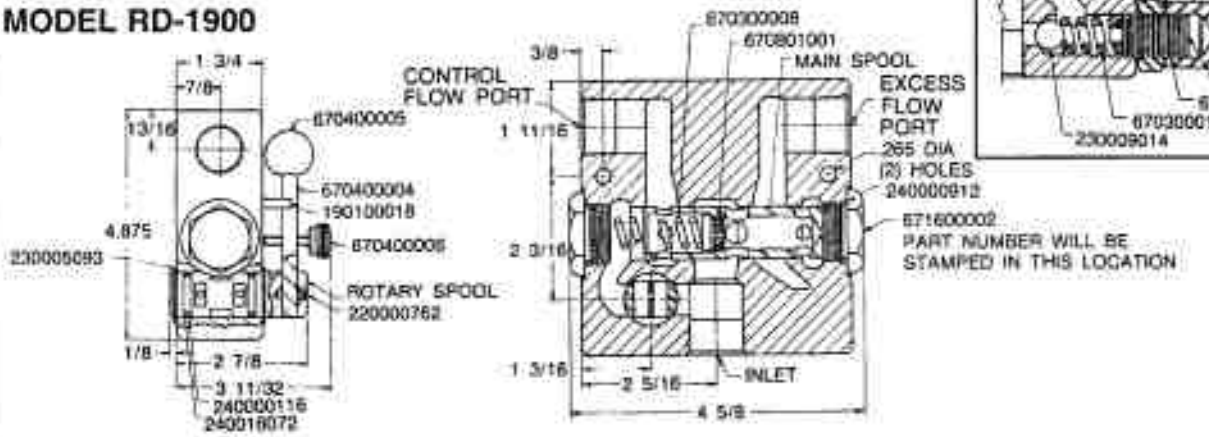


NOTE: spools are not available separate

RDRS MODEL RELIEF VALVE PARTS



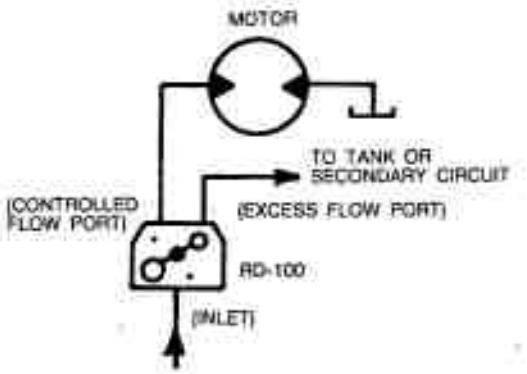
MODEL RD-1900



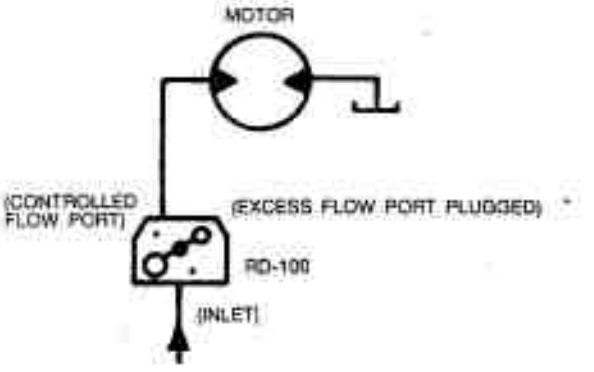
APPLICATIONS:

As illustrated in the circuit below the RD-100/RD-1900 adjustable flow control valves can be used to control the speed of a hydraulic motor. In this circuit oil from a source is directed into the inlet of the valve. By moving the handle the flow can be varied from zero when handle is vertical to maximum when the handle is horizontal. Oil not going to the controlled flow port is bypassed to the excess flow port where it can be used to supply another circuit or returned to tank. Instead of the control flow directly supplying a motor it can be used as a adjustable priority divider and provide adjustable priority flow to a directional control valve bank. Also as illustrated the RD-100/RD-1900 can be used as a restrictive type flow control. In this circuit the excess flow port is blocked. This would normally be used with a pressure compensated pump or in a closed center system.

BYPASS FLOW CIRCUIT



RESTRICTIVE FLOW CIRCUIT



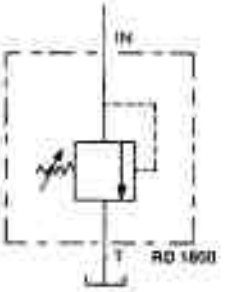
MODEL RD-1800 PRESSURE RELIEF
MODEL RD-900 SELECTOR VALVE

MODEL RD-1800
BALL/SPRING TYPE
DIRECT ACTING RELIEF

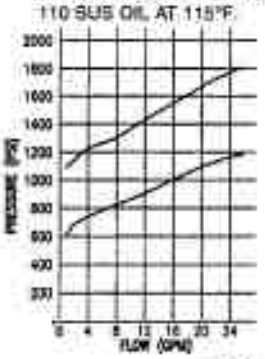
The PRINCE valve model RD-1800 is a direct acting ball/spring type pressure relief. The valve is compact and simple in design. This type relief is fast opening and is well suited for pressure spike protection. The performance curves below indicate the low cracking pressure typical to ball/spring reliefs. Please refer to the model RV relief for a system pressure relief. The valve is available with a standard steel seat, model RD-1800S, or with a hardened seat, model RD-1800H. Both models are externally adjustable.

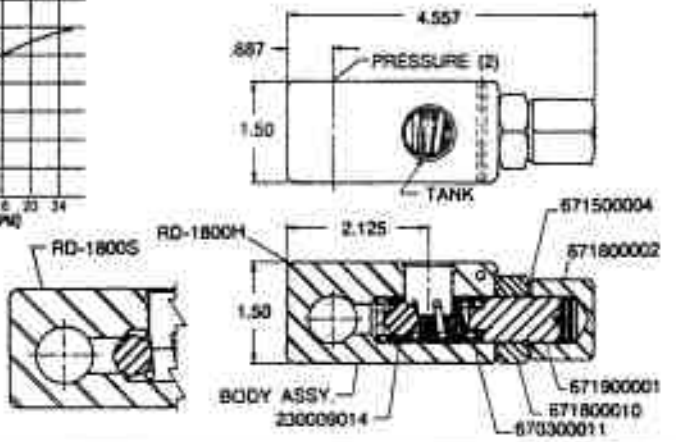
VALVE SPECIFICATIONS:
Capacity: 20 gpm max inlet flow
Pressure: 2500 psi max
Weight: 2 lb.
Adjustment Range: 1000 PSI to 2500 PSI

SYMBOL



RELIEF VALVE CURVE
AT VARIOUS SET POINTS.
110 SUS OIL AT 115°F.





STANDARD MODELS AVAILABLE		
MODEL #	PORT SIZES	MAX FLOW
RD-1837S	3/8 NPTF	8 GPM
RD-1850H	1/2 NPTF	16 GPM
RD-1850S	1/2 NPTF	16 GPM
RD-1875S	3/4 NPTF	20 GPM

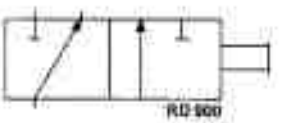
NOTE: Relief settings are 1500 PSI @ 12 GPM
For non-standard relief settings specify PSI in hundreds and GPM after model number
EX: RD-1850S-12-10 for **1200 PSI @ 10 GPM.**

MODEL RD-900
SELECTOR VALVE

The PRINCE valve model RD-900 is a manual 3 way 2 position selector valve. This valve will allow one pump source to supply two separate circuits. Pushing the handle in diverts oil flow to port away from handle. Pulling the handle out diverts oil flow to port nearest handle.

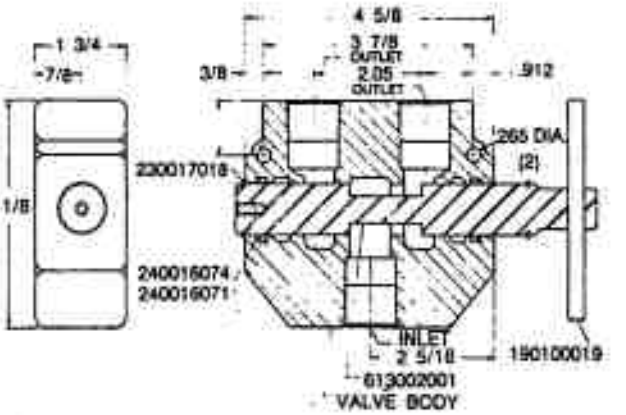
VALVE SPECIFICATIONS:
Capacity: 30 gpm max inlet flow
Pressure: 3000 psi max
Weight: 7 lbs.

SYMBOL



STANDARD MODELS	
MODEL #	PORT SIZES
RD-950	1/2 NPTF
RD-975	3/4 NPTF

SEAL KIT 660590025



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