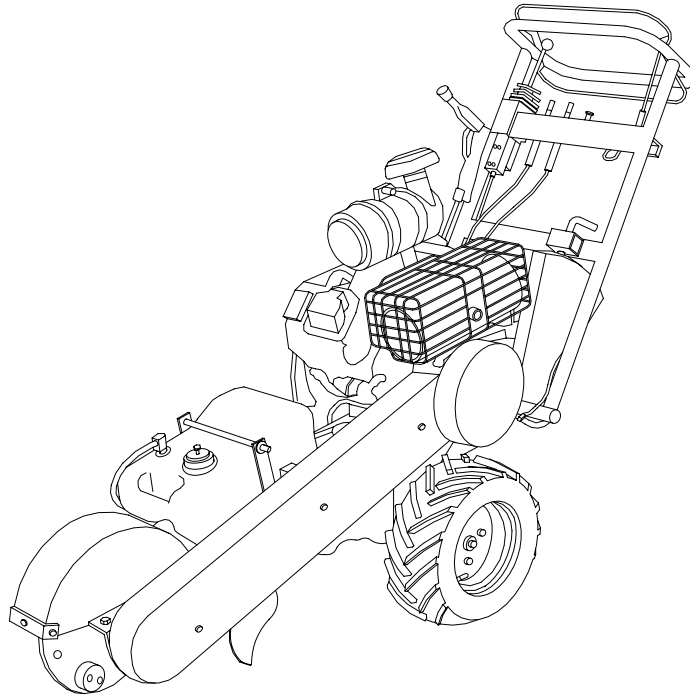


**USER & MAINTENANCE MANUAL  
- SPARES LIST -**

**Stump Grinder  
SP 20-25**



**BEFORE USING THE MACHINE , READ THE  
INSTRUCTION MANUAL**

<b>Table of Contents</b>	<b>Page</b>
<b>Safety</b> .....	2
<b>Operating Procedures</b>	
Before Starting.....	3
Starting Engine.....	4
Grinding Stump Hints.....	5
<b>Adjustments</b>	
Belt.....	6
Clutch.....	7
Hydrostatic Drive.....	7
Differential.....	7
Disk Brake Control.....	8
Operator Stop Switch.....	9
<b>Maintenance Check</b>	
Belts.....	6
Clutch.....	7
Engine.....	10
Hydrostatic Drive.....	8
Disk Brake Control.....	8
Teeth Setting	11
<b>Parts Diagram</b> .....	12
<b>Parts Listing</b> .....	13 - 16
<b>Wiring Diagram</b> .....	17

**Read & understand this manual  
Before Operating unit, understand all operating  
instructions & safety information**

**Safety Instructions**

1. Before using the machine, check that all bolts are tight & all guards in place.
2. The STUMP GRINDER **must not** be operated in an enclosed space.
3. Any maintenance/ cleaning work and removal of guards **must not be carried out** until the **engine has been switched off** and the **flywheel has come to a complete** standstill - it should be noted that the flywheel will turn for sometime after the power has been switched off.
4. On completion of repairs / maintenance work, **all guards must be fitted prior to putting the machine into operation.**
5. When carrying out repairs care should be taken to fit only genuine manufactures original parts or parts recommended by the manufacturer.
6. The Operator should be responsible for keeping **Third Parties** at a safe distance whilst the machine is in operation.
7. The machine should be operated only in accordance with instruction manual conditions.
8. While the machine is in operation the operator must wear the appropriate safety clothing and safety hat with ear defenders & protective face visor.
9. Where fitted, a hand brake must be applied when parking.
10. All operators must be suitably trained in the operation of this machine.
11. Shut off the engine immediately if the unit develops any unusual vibrations or noise
12. **Always remove key when not in operation**
13. **Contact with rotating teeth will CAUSE SERIOUS INJURY**
14. **Replace Worn Or Unreadable Safety Stickers**

**NO PERSONS UNDER THE AGE OF EIGHTEEN should be  
ALLOWED TO OPERATE THIS MACHINE**

**Ensure you have read & understood the entire manual  
before proceeding!!!**

**Check the following before starting**

1. Engine oil
2. Belt tension
3. Cutter wheel bearings
4. All belts, bolts & teeth are tight, guards are in place
5. That safety gear is used by the operator
6. Fuel
7. Controls on instrument panel

**NOTE: The 25hp version is very powerful,** and therefore until the operator becomes familiar with the use of the machine, you may find that you will experience a higher than normal use of hydstat belt.

**Ensure you have read & understood the entire manual  
before proceeding!!!**

1. Adjust handle bar to a comfortable position and secure with pin before starting the engine.
2. Ensure the brake is locked.
3. Push handle down so the cutter wheel is off the ground.

**Starting Engine**

1. Pull choke if engine is cold.
2. Be sure the on- off switch is in the "off" position.
3. Open throttle to 1/4 open - throttle has twist lock - turn left and pull in or out, then twist to the right to lock.
4. Engage Operator stop switch handle.
5. Turn key to start the engine.
6. Push choke in, turning throttle slowly, to full open position.

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### **Grinding Stump**

1. Place cutter wheel directly in front of the stump.
2. Using lever on handle, lock the one wheel brake- for tighter brake adjustment, turn the knob on top of the brake lever.
3. Pull throttle full on & twist to lock.
4. Turn clutch switch to ON position.
5. Continue to grind to desired depth.

### **Hints**

When grinding over 10" above or below ground, adjust handle bar for better control & comfort.

On larger stumps, chips may begin to build up under wheels. Release brake and pull machine towards you so that the chip pile is directly under the cutting wheel. Drop cutter wheel down on chip pile all material will discharge from the machine area.

Be sure the brake is adjusted so that locked wheel will not creep while grinding.

On larger stumps **DO NOT ALLOW STUMP GRINDER WHEELS TO DROP INTO HOLE-** fill with chips or change position.

Just complete stump flush with ground, then go back and cut to desired depth.

### **After grinding**

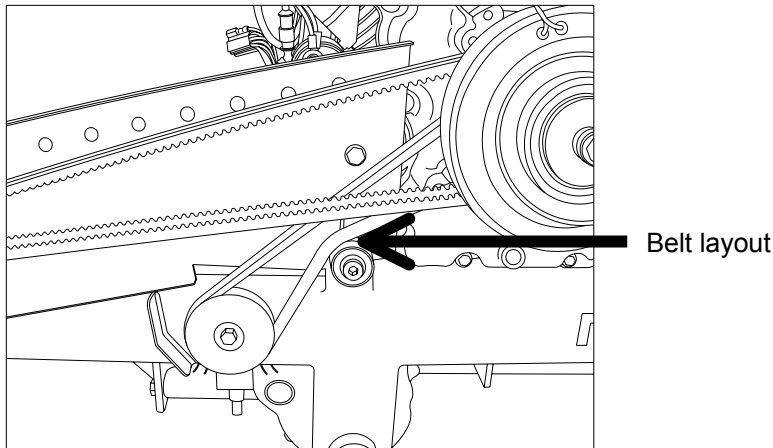
Allow engine to cool  
Wash off grinder  
Inspect grinder  
Load for transport

**Before attempting any adjustment, be sure that the engine is shut off. The key, spark plugs, battery cable are removed. And the engine cool to touch!**

### **Belt tension Adjustment**

1. Remove belt guard
2. Loosen inner guard bolts (2) attached to engine
3. Loosen hydrostatic drive belt idler
4. Loosen (4) engine base bolts
5. With long socket extension drive, move engine forward with rear adjusting bolt
6. When belt tension is proper (11 - 14 ft/lbs. tension) retighten all loosened bolts
7. Reposition belt idler for hydrostatic drive
8. Reassemble belt guard

NOTE: NEW BELTS REQUIRE A BREAK-IN PERIOD OF APPROX 2HRS, READJUSTMENT MAYBE NEEDED AT THIS TIME.



**Ensure you have read & understood the entire manual  
& follow all safety instructions before proceeding**

Hydrostatic Belt Adjustment	Adjustment is made by moving cam bearing up or down. <b>Caution:</b> Over tightening this belt will damage the hydrostatic pulley.
Differential Adjustment	This unit is enclosed & needs minimal maintenance
Electric Clutch Engagement	<p>The electric clutch needs no adjustment or lubrication</p> <p><b>Caution</b></p> <p>A. Never engage clutch over 1600 rpm. Any clutch engagement over 1600 rpm can &amp; will damage the clutch.</p> <p>B. Make sure that there is a minimum of 12 volts to the clutch at all times. The torque on the clutch must move freely at all times, from 1/8" up and down, and from side to side. You can inspect the torque arm through the square hold located in the backside of the belt guard.</p> <p><b>Danger:</b> never transport the stump grinder with the cutter wheel rotating or the clutch engaged.</p>
Hydrostatic Drive - Neutral Adjustment	The drive itself contains no adjustments. The ground control lever, however, when in automatic neutral position, should allow any forward or reversing creeping of the grinder (providing the grinder is on level ground, on unlevel ground, see disk brake control. Neutral position is adjusted by removing the quick disconnect from the control arm located on the bottom side of the transmission. Turn the socket in one complete turn in either forward or reverse position to adjust transmission onto neutral, more than one turn may be needed sometimes.

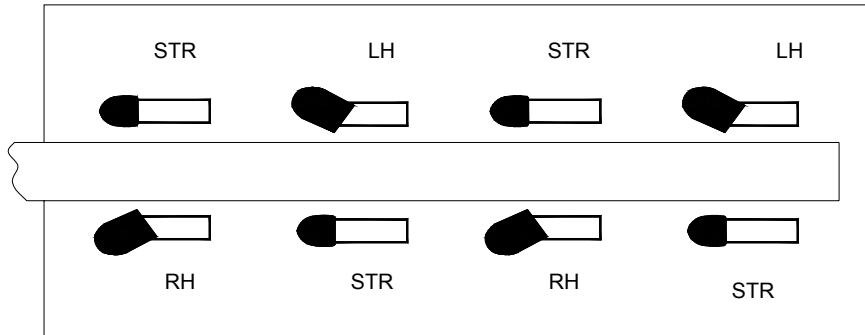


**Before attempting any adjustment, be sure that the engine is shut off. The key, spark plugs, battery cable are removed. And the engine cool to touch!**

Teeth should be positioned in the pockets & tightened to 100 - 110 ft/lbs. torque

Teeth should be set using a tooth gauge so all teeth will be projecting the same amount.

Teeth should be set as follows:



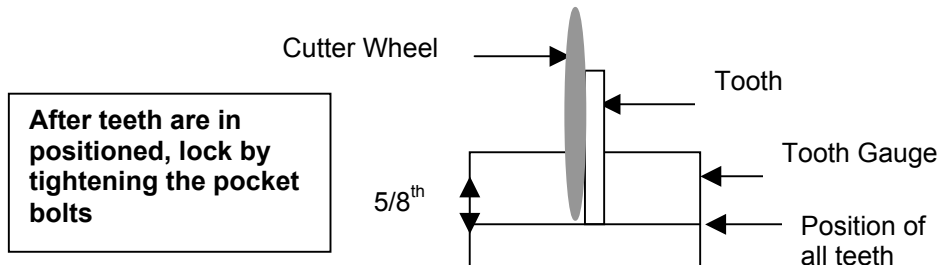
**Caution:** Never use the machine with missing teeth or badly worn teeth, this will cause the cutter wheel to be out of balance & cause wear on bearings & shaft.

The pockets are reversible, when turning, position them in the exact location- this will ensure the cutter wheel remains in balance.

Teeth should be kept sharp.

### Installation of Teeth

When installing teeth on the cutter wheel, be sure the teeth are all extended to an equal length beyond the wheel. A tooth gauge is provided for this.



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& follow all safety instructions before proceeding**

Hydrostatic Drive

Disengagement Adjustment

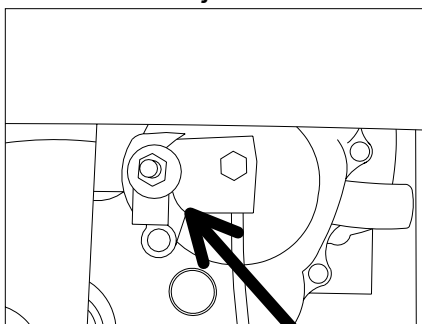
When the engine is not running, the grinder cannot be moved, since the hydrostatic drive is in locked position. On the beltguard side, there is a handle. Push the handle forward and down, this will unlock the hydrostat unit and allow freewheeling.

When the engine is running, there is power to the transmission. Be careful to only move slowly, the control valve to transport the machine in a forward or reverse direction. The travel speed is determined by the rpm of the engine, and how quickly the control valve is moved.

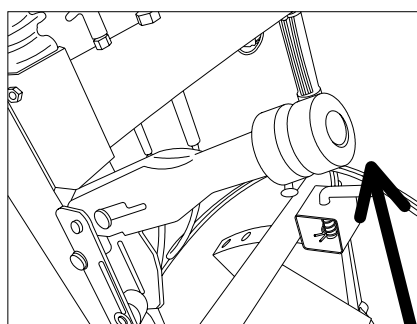
When using grinder on unlevel ground, the grinder may have a tendency to creep down hills. The brake control located on the control panel can be pulled so as to lock the disc brake on the transmission.

**Caution:** Damage can occur to Brake if too much pressure is applied.

Handbrake Adjustment



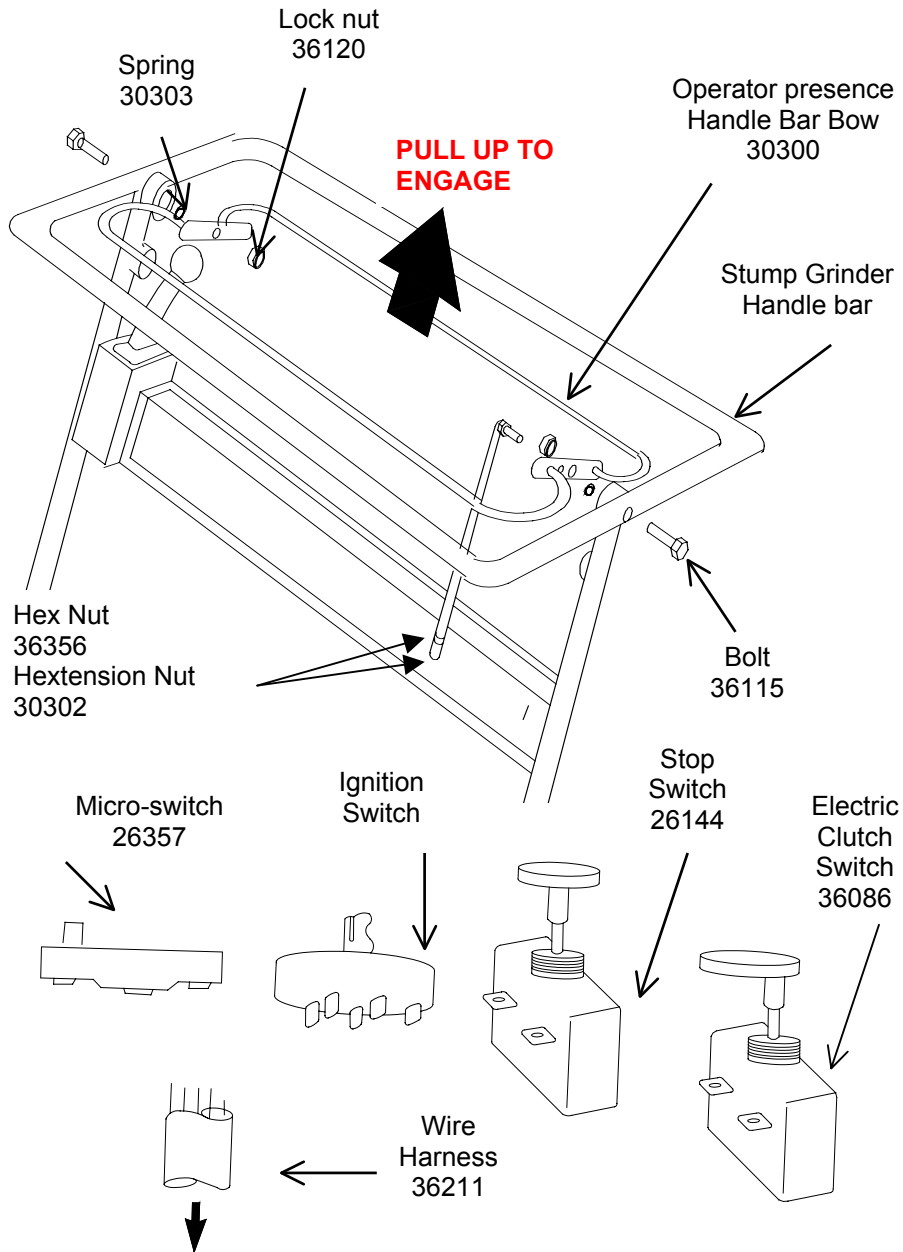
Adjustment nyloc



Adjustment Screw

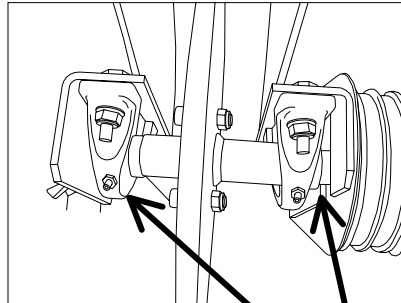
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**Never attempt to alter, modify, or override this switch !!!**

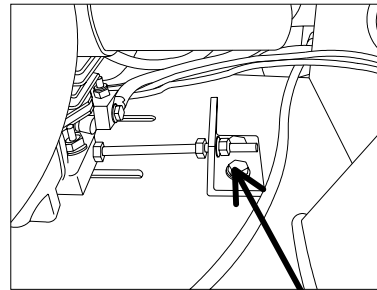


**Before attempting any adjustment, be sure that the engine is shut off. The key, spark plugs, battery cable are removed. And the engine cool to touch!**

Item	Action	Each use
Bearings, shaft	Grease	X
Bearings, wheel	Grease	X
Belt Tension	Tension	X
Bolts	Tightness	X
Teeth	Tightness, sharpness	X
Safety switches	Operational	X
Safety stickers	Readable	X
Tyres, Flaps	Condition	X
Wires, Cables	Condition	X
<b>Engine</b>	<b>Refer to Manual</b>	

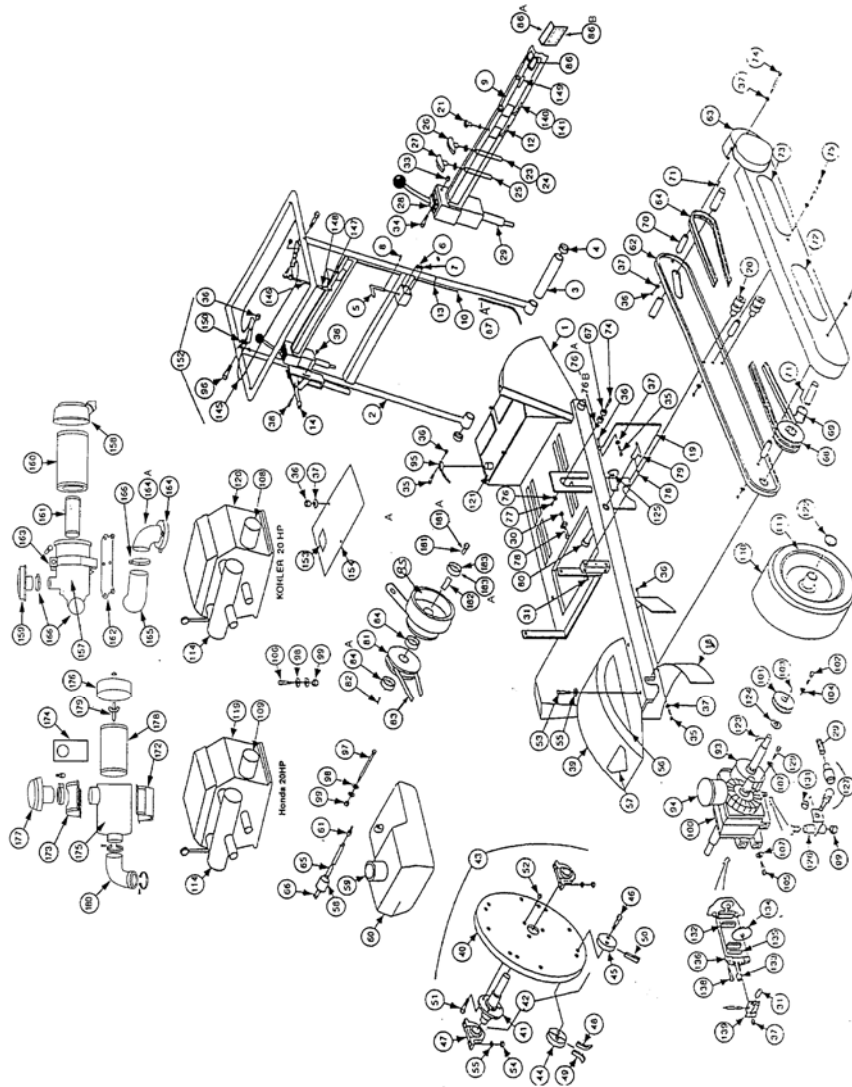


Grease points



Engine adjustment

# Parts Diagram - Models 20sp & 25sp



### Parts List - Models 20sp & 25sp

<b>Item No</b>	<b>Quantity</b>	<b>Part No.</b>	<b>Description</b>
1	1	30160SP	Frame 20SP - 25SP
2	1	324080	Handle Bar
3	1	324081	Connector Bar
4	2	324116	Lock Collar
5	1	324138	Bent Pull Pin
6	1	324139	Spring
7	1	324140	Washer
8	1	36160	Clip
9	1	36189	Control Panel Sticker
10	1	36211	Wire Harness
12	1	36144	On Off Switch
13	5	36146	Cable Tie
14	1	36148	Brake Lever
15	1	36150	Outer Housing Brake
16	1	36149	Inner Brake Cable
18	1	30098	Chute Flap
19	1	30096	End Flap
20	2	316133	Idler Bearing
21	1	36144	Knob (on - off) Switch
22	1	36230	Throttle Cable
25	1	36227	Choke Cable
28	1	36426	For / Rev Control
29	1	36426	Control Cable
30	1	36122	Hex Nut
31	2	36130	Socket Set Screw
33	8	36182	Lock Nut
34	8	36181	Bolt
35	13	36158	Bolt
36	20	36120	Lock Nut
37	19	36126	Washer
38	2	36112	Bolt
39	1	30158	Cutter Box
40	1	30130	Cutter Wheel

### Parts List - Models 20sp & 25sp

<b>Item No</b>	<b>Quantity</b>	<b>Part No.</b>	<b>Description</b>
41	1	30185	Cutter Shaft
44	4	36172	Pockets CS
45	4	36171	Pockets TH
46	8	36132	Bearing Bolt
47	2	36135	Pillow Block Bearing
48	2	16174	Tooth, RH
49	2	16175	Tooth, LH
50	4	16173	Tooth, STR
51	3	36131	Wheel Stud
52	3	36125	Nyloc
53	4	36192	Bolt
54	4	36121	Nyloc
55	10	36127	Washer
56	2	36221	Safety Sticker
57	1	36284	Safety Sticker
58	1	36258	Fuel Filter
59	1	36310	Filler Cap
60	1	36270	Fuel Tank
61	1	36260	Tank Nipple
62	1	30053	Inner Belt Guard
63	1	30051	Outer Belt Guard
64	2	36157	Cutter Wheel Belts
65	1	36256	Fuel Hose
66	4	36257	Clamp, Hose
67	1	36238	Cam Bearing
68	1	36237	Cutter Wheel Pulley
69	1	36152	Bushing
70	3	30054	Spacer
72	1	36217	Sticker
73	1	36249	Sticker
74	2	36114	Bolt
75	1	36123	Bolt
77	1	36191	Nyloc
78	1	36117	Set Screw
80	1	36268	Cam Lever

### Parts List - Models 20sp & 25sp

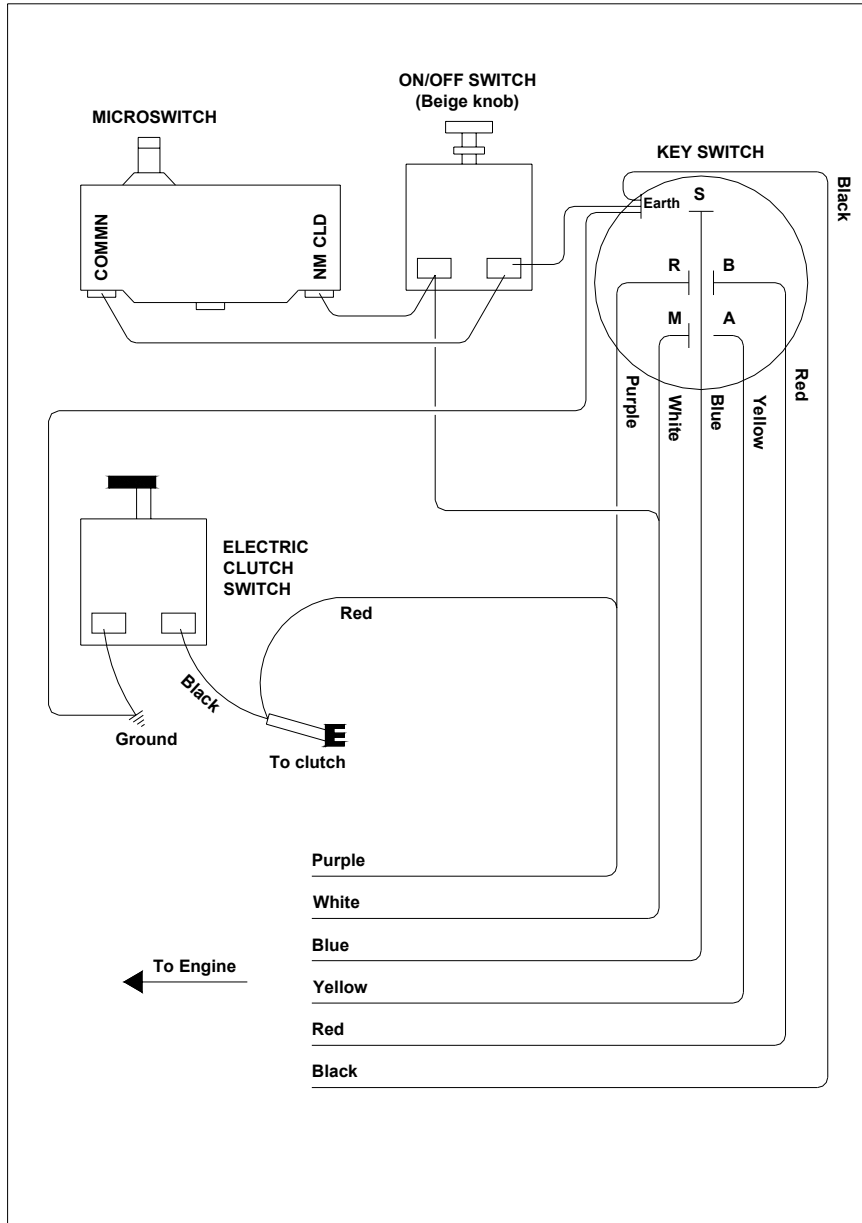
Item No	Quantity	Part No.	Description
81	1	36239	Sheave- 3 -1/2" dia. 1- 7/16"
82	1	36307	Keyway
83	1	36235	Hydrastat Belt
84	1	36303	Spacer
84	1	36236	Shim
85	1	36250	Electric Clutch
86	1	36086	On -Off Switch
86A	1	36364	On - Off Sticker
87	1	36365	Wire Harness
93	1	36248	Peerless Diff
94	1	36241	Transmission Pump
95	2	36212	Battery Cable
97	1	36209	Bolt
98	8	36129	Washer
99	4	36193	Nyloc
100	1	36244	Gasket
101	1	36240	Sheave 3" dia. 5/8bore
102	1	36309	Bolt
103	1	36312	Keyway
104	1	36312	Nyloc
105	3	36200	Bolt
106	4	36115	Bolt
107	7	36190	Washer
108	1	36285	Oil Filter
110	2	36245	Tyre
111	2	36245-1	Wheel
111	2	36245-2	Hub
114	1	36305	Exhaust
119	1	36247	Kohler 25hp
120	1	36247	Kohler 20hp
121	1	36213	Battery - 071
122	2	36264	Ring Clip
123	2	36263	Woodruff Key
124	1	36246	Spacer , Wheel
125	1	36232	Cable, Locking Bracket
126	1	36267	Control Arm- Transmission
127	1	36234	Pivot- Hydrastat Cable



### Parts List - Models 20sp & 25sp

<b>Item No</b>	<b>Quantity</b>	<b>Part No.</b>	<b>Description</b>
129	4	36186	Bolt
130	4	36190	Washer
131	1	36272	Nyloc
132	2	36261	Brake Pad
133	2	36240	Dowel Pin
134	1	36341	Disk Brake
135	1	36342	Brake Pad Plate
136	1	36343	Brake Pad Holder
137	1	36344	Nyloc
138	2	36345	Bolt
139	1	36233	Lever, Cable Clamp
	1	36242	Gear Spacer
	1	36243	Tooth Gauge
	1	36265	Ring Clip
145	1	36300	Operator Presence Bar
146	1	36301	Linkage
147	1	36302	Extension Nut
148	1	36356	Hex Nut
149	1	36357	Micro Switch
150	1	30303	Spring
151	1	36355	Sticker
152	1	36358	Operator Presence -Stop Switch Kit
154	1	36398	Battery Lid
156	1	36373	Heavy Duty Air Cleaner
157	1	36374	Air Cleaner Hood
158	1	36375	End Cap- Air Cleaner
159	1	36376	Pre Cleaner Cap
160	1	36377	Air Filter
161	1	16378	Inner Filter
162	1	36379	Bracket - Engine Mounting
163	1	36380	Bracket - Air Cleaner Mounting
164	1	36381	Carb Adaptor
165	1	36382	Hose Cab Adaptor
166	1	36383	Clamp- Hose & Pre Cleaner
181	1	36370	Engine Shaft Washer Cap
182	1	36371	Keyway
183	1	36372	Bolt

# Wiring diagram



**CARAVAGGI MACCHINE INDUSTRIALI**  
**Via Monte Adamello , 20**  
**25037 Pontoglio ( BS ) - ITALY**  
**Tel. +39 030 7470464 - Fax +39 030 7470004**  
**Internet <http://www.caravaggi.com>**  
**Email [info@caravaggi.com](mailto:info@caravaggi.com)**