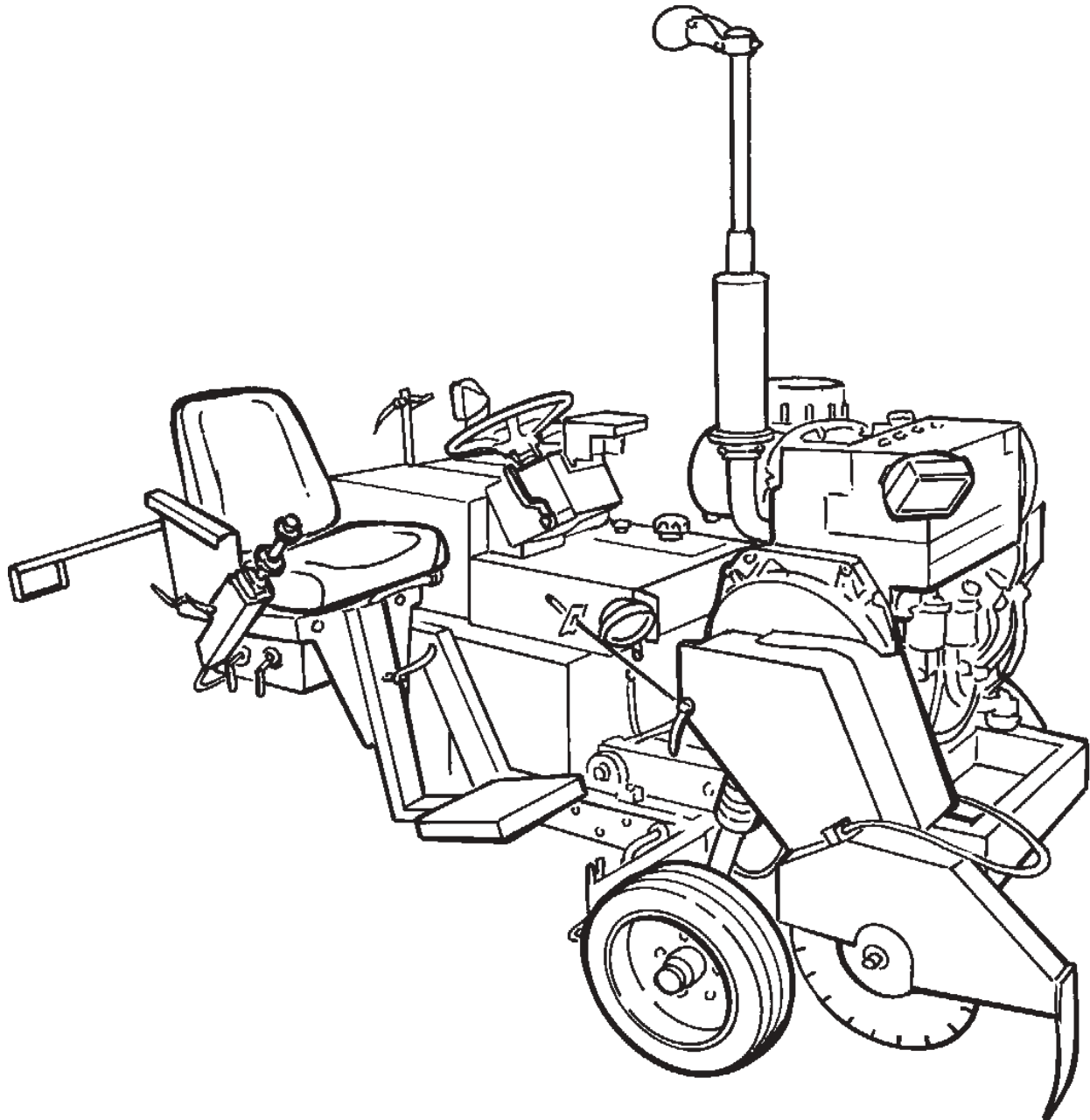




CC7878 EZ RIDER JOINT SAW
Owner / Operator Manual



333 Prospect Street - Elyria, OH 44035 U.S.A
(440) 323-4616 - (800) 321-5336 - Fax (440) 365-2612



Table of Contents

Shipping Papers and Information	4
Safety Notes	5
Operating Procedure	6
Controls and Their Functions	7
Break-in Period and Fluid Capacities	10
Blade Mounting Instructions	11
Adjusting Blade RPM	12
<i>Blade RPM Table</i>	12
Starting Engine	13
EZ Direction Control Lever	14
<i>Using the Direction Control Lever</i>	14
<i>Using the Blade Elevation Switch</i>	14
<i>Neutral Adjustment</i>	14
<i>Switch Replacement</i>	15
<i>Install New Speed Control Cable</i>	16
EZ Blade lowering Flow Control	17
EZ Saw Guide Installation and Alignment	18
EZ Water Hook up	19
<i>Hooking up Water to Saw</i>	19
<i>Adjust Water Flow to Joint Cleaner and Blade</i>	19
<i>Using the Blade Safety Switch</i>	20
EZ Depth Stop	21
<i>Adjust Depth Stop</i>	21
Lubrication and Replacement Filters	22
Maintenance	23
<i>Scheduled Maintenance</i>	23
Maintenance	24
<i>Inspect and Adjust Blade Drive Belts</i>	24
<i>Inspect and Adjust Alternator and Hydraulic Pump Drive Belts</i>	25
<i>Bushing Removal</i>	26
<i>Seat Switch Operation</i>	27
Wiring Diagram for	28
Hydraulic Schematic	29
Parts List	30
Limited Warranty	47

Shipping Papers and Information

A packet containing IMPORTANT INFORMATION has been enclosed with your saw. This packet contains:

- 1) Operation Instructions
- 2) Parts List
- 3) Warranty Information
- 4) Manufacturer's Documents
 - a) Engine
 - b) Hydraulic Power Unit

IMPORTANT: This manual contains the basic information required to operate, maintain and repair the DIAMOND PRODUCTS saw you have purchased. The use of this manual insures accurate adjustments, operation and proper lubrication of your equipment. Please keep it handy.

Any parts orders or service problems relating to DIAMOND PRODUCTS equipment should be directed to the DIAMOND PRODUCTS Parts Department at either (440) 323-4616 or (800) 321-5336. When ordering parts, please have the following information available.

Serial Number: _____

Model Number: #CC7878 EZ Rider Joint Saw

Engine Model (H.P.): BF4L1011F /75 HP

Engine Manufacturer: Deutz

Replacement Part Number(s): _____

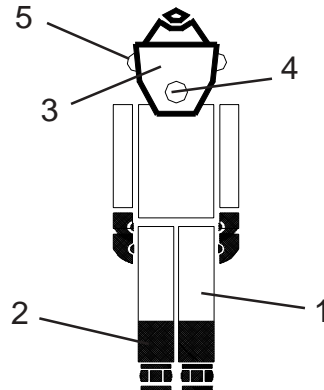
Safety Notes

PLEASE READ AND UNDERSTAND ENTIRE OPERATORS MANUAL BEFORE PROCEEDING

WARNING: Protective clothing must be worn. Refer to ANSI Regulations.



- 1) Wear long pants.
- 2) Wear heavy leather boots or shoes.
- 3) Wear a protective face shield.
- 4) Wear a respirator.
- 5) Wear ear protection.
- 6) Never leave saw unattended while the engine is running.
- 7) Remove objects from, and never stand in path of blade while starting or operating the machine.
- 8) Never run wet cut blades without sufficient water.
- 9) Do not use excessive force or side pressure during sawing operations.
- 10) Never stand on any part of machine.
- 11) Never allow another person to adjust or operate the controls while you are operating unit.
- 12) Never transport the saw with the engine running or with the front of the blade-guard in the up position.
- 13) Allow hydraulic lines to cool before disconnecting hoses or fittings.
- 14) Be cautious when getting on or off saw due to slippery conditions caused by wet sawing.
- 15) Do not touch exhaust or engine parts until cooled down.



WARNING: Never exceed maximum RPM stamped on blade.



Operating Procedures

Note: This is a step by step guideline. You **MUST** read the entire manual and understand the procedures before operating.

Prior to start up: Read the Deutz Engine Manual
Check all fluid levels before starting engine.

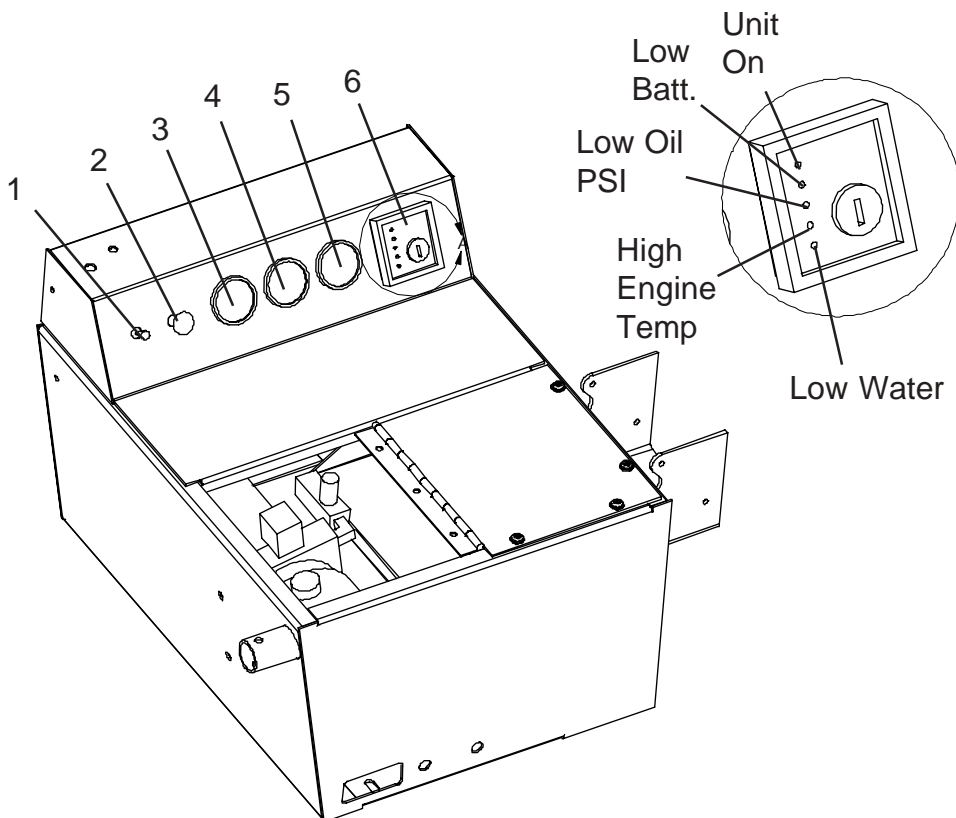
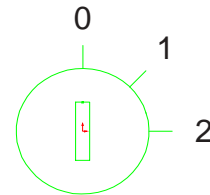
- 1) Route water hose through hose support and connect to water inlet coupling.
- 2) Turn on water and check for flow through all bladeguard tube ports.
- 3) Mount blade(s)
- 4) Align front blade guide with blade.
- 5) Check to make sure speed control lever is in the neutral (center) position.
- 6) Be sure blade is unobstructed and not resting on the ground.
- 7) Turn blade safety switch to the "off" position for starting engine.
- 8) Start the engine according to the Deutz and DIAMOND PRODUCTS manuals.
- 9) After the Engine is warmed up, set the engine to the proper RPM for the blade you are using.
- 10) Travel to the desired sawing position by stroking the speed control lever in the direction you wish to travel. The saw will turn in the same direction you turn the steering when moving forward.
- 11) Turn the water supply.
- 12) Turn the blade safety switch to the "on" position.
- 13) Lower the blade into the cut and adjust the stop to the desired depth.
- 14) Slowly move the lever forward to begin the sawing.

NOTE: Avoid excessive steering while sawing. Proper blade selection and sawing speed will determine the required amount of oversteer required for proper tracking.

- 15) At the end of the cut, be sure the blade is completely out of the pavement before turning off the water and proceeding to the next location.
- 16) Be aware of the hose location before moving to prevent running over or sawing through the hose.

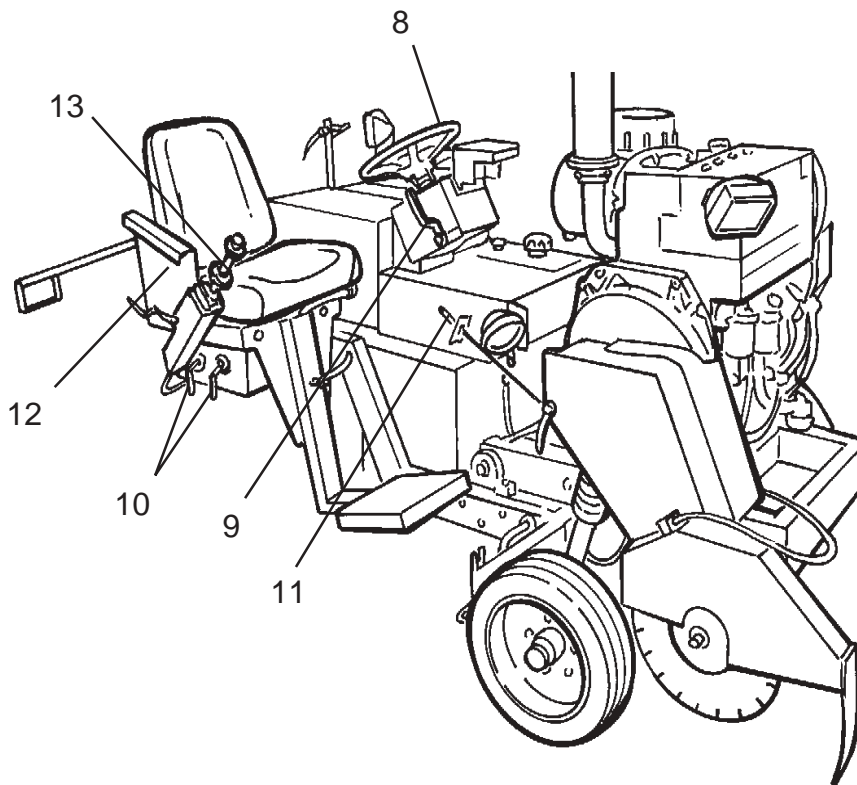
Controls and Their Functions

- 1) Blade Safety Switch: Used to override the low water safety feature. "ON" to activate low water safety, "OFF" for starting and to override low water safety.
- 2) Light Switch: Pull to turn on all front and rear lights, push to turn all lights off.
- 3) Fuel Level Gauge: Indicates fuel level and is marked in 1/4 tank increments.
- 4) Hour Meter: Indicates total hours of engine operation (activates with keystroke).
- 5) Engine RPM Gauge: Tachometer indicating engine RPM. This unit has a 1 to 1 Ratio (Engine RPM equals blade RPM).
- 6) Key Switch with Indicator Lights:
Key Switch Positions: 0 - OFF
1 - RUN
2 - START
- 7) Indicator Lights: Indicate (from top to bottom) - low battery voltage, low oil pressure, high engine temperature, and low water pressure for blade. In case of an automatic fault shutdown, the light(s) that remain lit will indicate the problem.



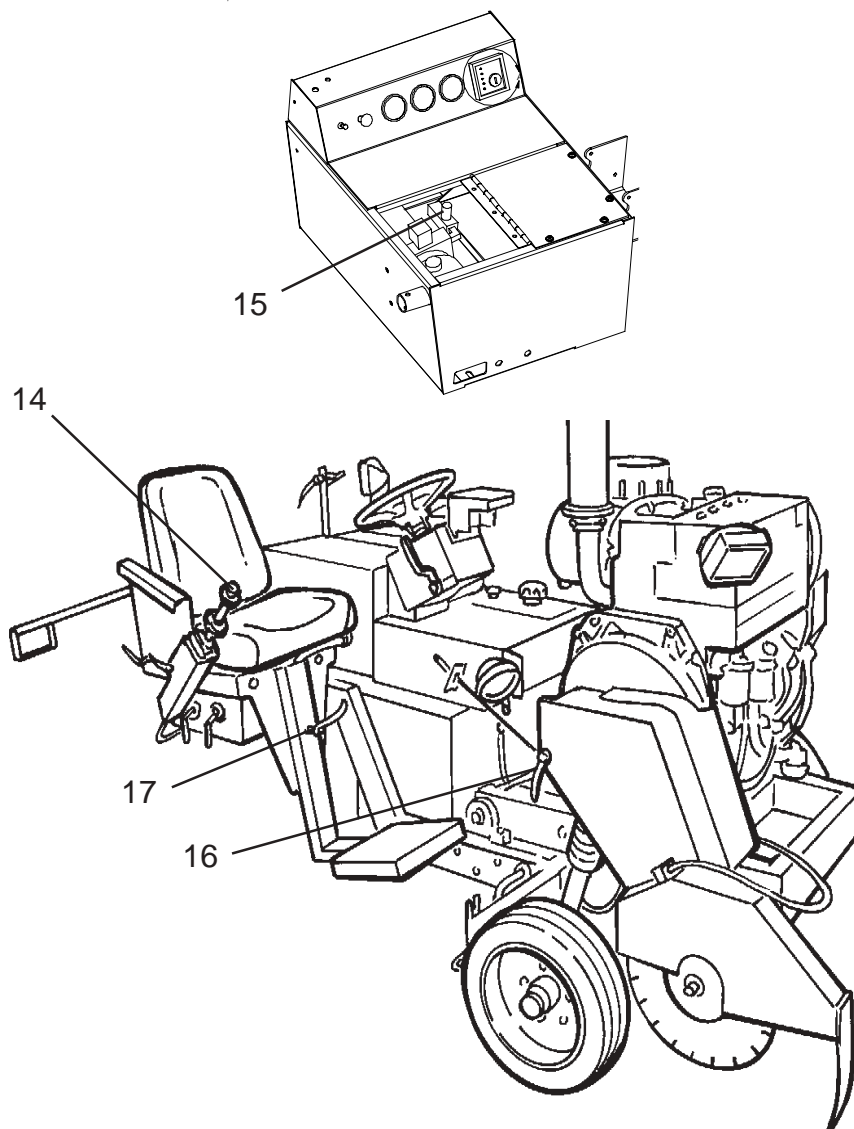
Controls and Their Functions (Cont.)

- 8) Steering Wheel: When driving saw forward, turn wheel CW to turn saw to the right - turn wheel CCW to turn saw to the left. Wheel is mounted on pivoting mount. To adjust angle of wheel, loosen handle bolt, move up/down, then re-tighten handle bolt.
- 9) Water On/Off Valve: Used to quickly turn water on or off for both joint cleaner and blade. Push handle forward to turn water off. Pull handle back to turn water on. To adjust the flow to the joint cleaner and the blade, use the Independent Flow Control Valves mounted under the seat.
- 10) Independent Flow Control Valves: Adjust the desired flow to the blade and to the joint cleaner independently from completely closed to wide open. Turn valve CW to decrease flow and CCW to increase flow.
- 11) Throttle: Pull "T" handle to increase engine speed and rotate to lock.
- 12) Arm Rest: To adjust arm rest up or down, loosen two handle bolts, move to desired position and tighten handle bolts.
- 13) Direction Control Lever: move lever forward to drive saw forward, back to drive in reverse. To go faster, move lever further.



Controls and Their Functions (Cont.)

- 14) Blade Elevation Switch: A thumb controlled switch on the top of the Direction Control Lever. Move the switch to the right to lower the blade, to the left to raise it. Adjust the rate of descent with the Flow Control Valve.
- 15) Flow Control Valve: Located in box under operator's left arm. Turn valve CW to slow rate of descent, CCW to speed up rate of descent.
- 16) Depth Stop: Used to limit the depth of cut. To set depth stop, lower blade to desired height, then rotate clockwise until it bottoms out against frame.
- 17) Footrest Height Adjustment: Back handle out until footrest will slide, move seat to the predrilled hole closest to the desired height and retighten.



Break-in Period and Fluid Capacities

Engine:

After 50 hours of operation you must change oil, oil filter and fuel filter. Also check V-belt tension, valve clearance, engine mounting and check for oil leaks. Refer to page 3.1 of Deutz engine manual for more details.

Hydraulics:

After approximately one hour of operation, check hydraulic fluid level and check for any hydraulic leaks.

After 50 hours of operation, change the hydraulic return filter element.

Engine Oil:

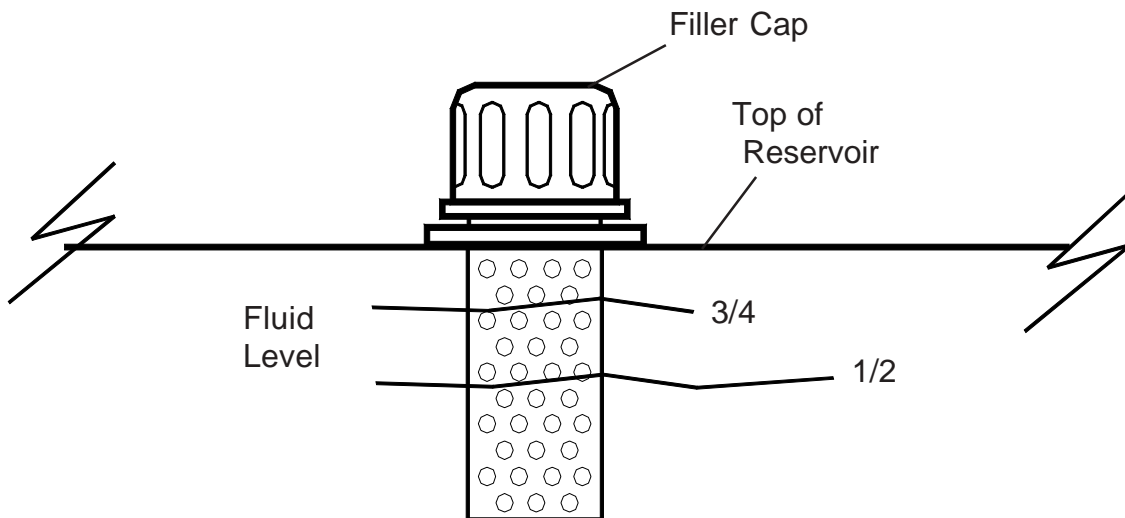
Use a CD/SE or CD/SF oil. Refer to the viscosity chart on page 4.1 of the Deutz manual for proper oil selection. Always check dipstick to verify correct oil volume.

Fuel:

Use fuel meeting ASTM D 975-1:1-D and 2-D specifications. Refer to page 4.2 of the Deutz manual for details. Fuel tank capacity is 19 gallons.

Hydraulic Oil:

Use a high quality MV32 or ISO 68 hydraulic oil. Hydraulic reservoir capacity is 10 gallons, however the hoses and components will hold an additional amount. Check level by removing filler cap. The oil level should be approximately 1/2 to 3/4 the way up the mesh strainer in the tank.



Blade Mounting Instructions

NOTE: Before mounting the blade, clean the blade collars and stub shaft.

EZ ARBOR Shaft Blade Mounting Instructions:

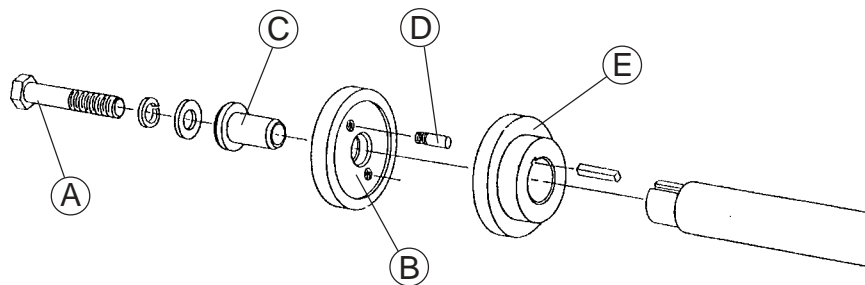
- 1) Remove Bladeguard - loosen retaining screw on the side of the bladeguard and you will be able to lift the bladeguard from the saw.
- 2) Remove bolt (A). This bolt has right hand threads (to remove turn counterclockwise).
- 4) Pull off outside collar (B) and the stub shaft (C), wipe down collar and blade. Install new blade. If blade pin (D) is removed, it must be reinserted in the outside collar to go through the blade and the inside collar (E).

WARNING: Observe rotation arrow on blade and do not exceed maximum RPM stamped on blade. To set proper RPM, consult the table.



- 5) Reinstall outside collar, stub shaft and secure with bolt. Strike wrench with hammer to secure tightly.
- 6) Reinstall bladeguard and secure retaining screw.

NOTE: For wider cutting applications Items A and C are available in longer sizes.




WARNING: Max blade capacity for the EZ Rider saw is 20" Diameter.




Adjusting Blade RPM

WARNING: When you change the blade size on your saw, it is important to check the blade for the recommended blade RPM, which is stamped on the blade.

The RPM's should be adjusted according to Table 2 below:

**WARNING:** TO PREVENT BODILY INJURY



**WHEN CHANGING BLADE SIZE,
ADJUST ENGINE RPM ACCORDING
TO THE RPM CHART TO MATCH
RECOMMENDED BLADE RPM.
NEVER EXCEED MAXIMUM RPM
STAMPED ON BLADE.**

RPM CHART (For Reference Only! Refer to RPM stamped on blade)

Blade Size	Typical RPM *
12	2865–3505
14	2460–3005
16	2155–2630
18	1910–2630
20	1720–2100

THIS UNIT IS SET UP WITH A 1:1 SHEAVE RATIO. THE TACHOMETER READING REFERS TO BOTH THE ENGINE AND BLADE RPM.

*BASED ON 9000 TO 1100 SURFACE FEET PER MINUTE

NOTE: This chart is for reference only. Always check the RPM stamped on the blade and adjust sheave sizes and engine RPM to required settings. Consult DIAMOND PRODUCTS for assistance if necessary.

Starting Engine

WARNING: Be sure blade is unobstructed and not resting on the ground before starting engine.



Note: Read the engine instruction manual before starting.

Make sure directional control lever is in neutral.

Pull throttle handle out about halfway and turn to lock in place.

Make sure shutdown lever is in operating position (refer to illustration). This lever is spring loaded to always be in the operating position, when working properly.

Start engine by rotating the ignition key to the right.

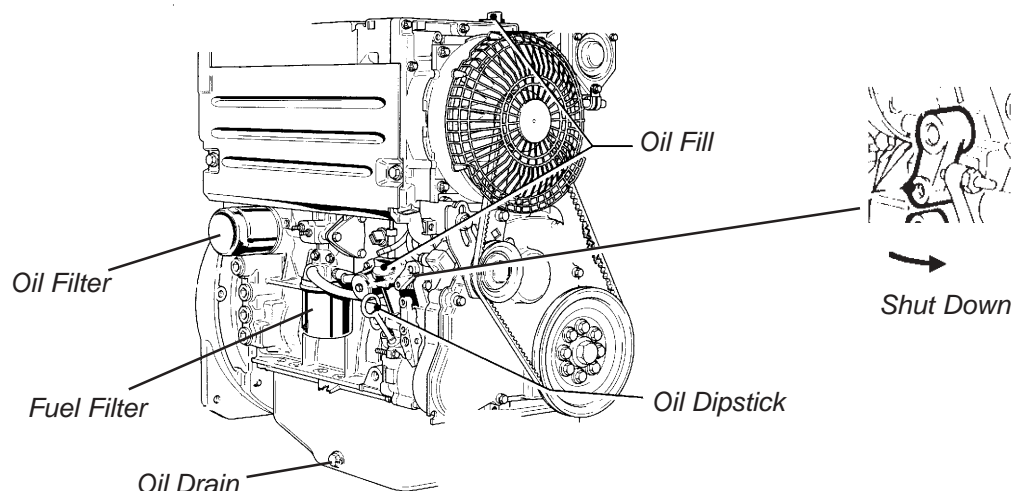
Note: DO NOT crank engine for more than 20 seconds at a time. If engine fails to start, wait 1 minute before attempting to start the engine again. If engine does not start after 2 attempts, refer to the diagnosis chart in the engine manual.

Note: Allow engine to warm up a few minutes before applying load. DO NOT race or gun the engine to hurry warm-up.

When the engine is warm, pull the throttle out and adjust to proper RPM and lock in position by turning the handle to the lock position.

Note: Refer to Engine RPM Table to find proper RPM for specific blade size.

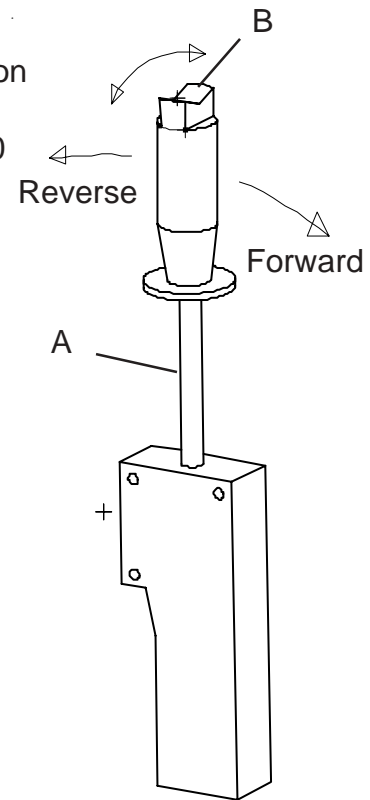
To stop the engine, return engine to idle for 1-2 minutes then rotate the ignition key to the left or "off" position.



EZ Direction Control Lever/Pump Neutral Adjustment

Using the Direction Control Lever

The Direction Control Lever (A) is used to control the direction and speed of the saw. It is spring loaded to the neutral position. Moving the lever forward propels the saw forward 0-350 FPM. Pulling the lever back from neutral propels the saw in reverse from 0-350 FPM. The further the control is stroked, the faster the saw will travel.



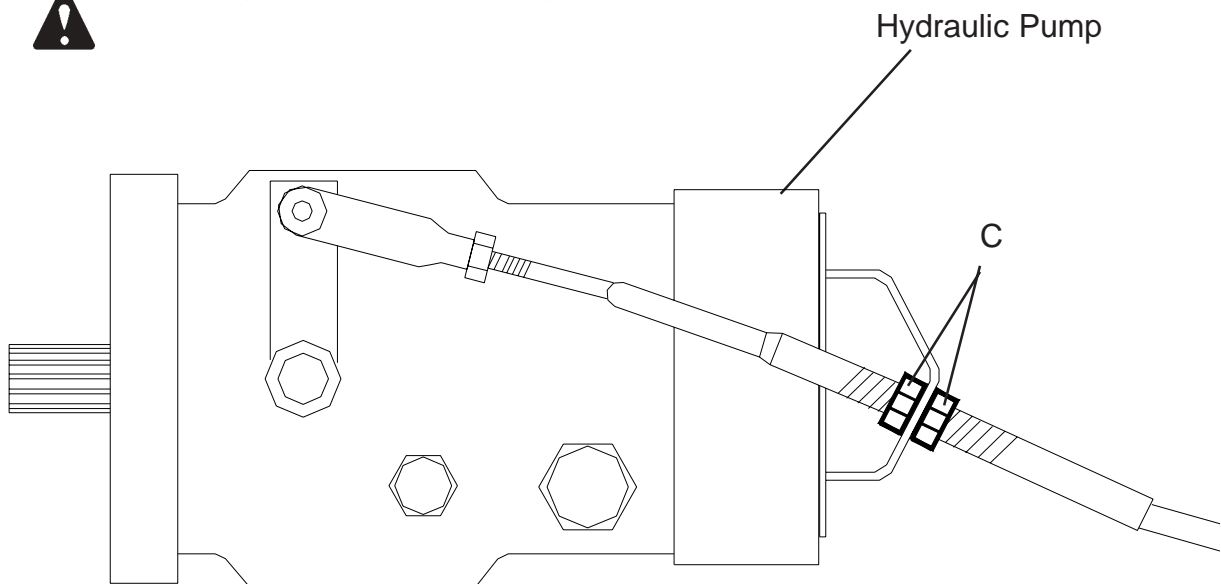
Using the Blade Elevation Switch

The Blade Elevation Switch (B) is a thumb controlled switch on the top of the Direction Control Lever. Move the switch to the right to lower the blade, to the left to raise it. Adjust the rate of descent with the Flow Control Valve.

Neutral Adjustment

If the unit creeps when lever (A) is in the neutral (center) position, adjustments must be made. Loosen nuts (C) and adjust as required.

Warning: Rear drive wheel must be jacked up off the ground while adjusting.



Control Lever Switch Installation

Switch Replacement and Wire Harness Replacement

Remove rubber boot (A)

Remove (6) screws that hold the plastic handle halves (B) together

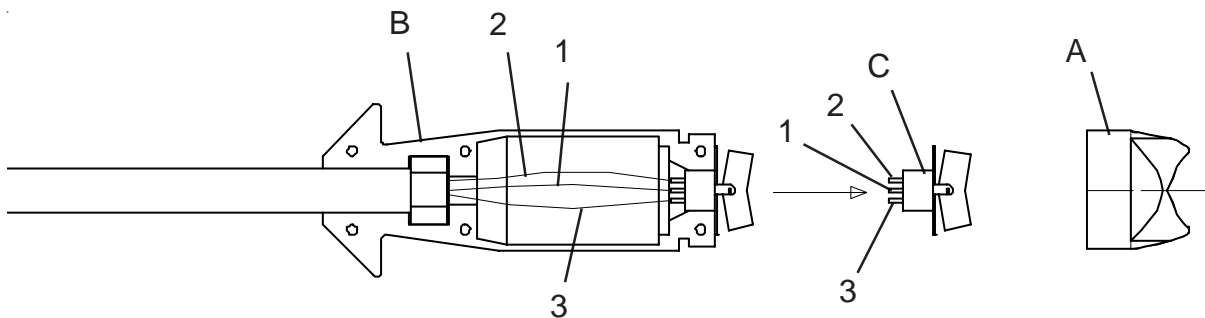
Lay the unit on a flat surface and remove one of the halves.

Lift out switch (C) and replace with new one making sure it is wired as shown

Replace handle half and tighten. As the two halves are tightened, the switch will be squeezed and held in place

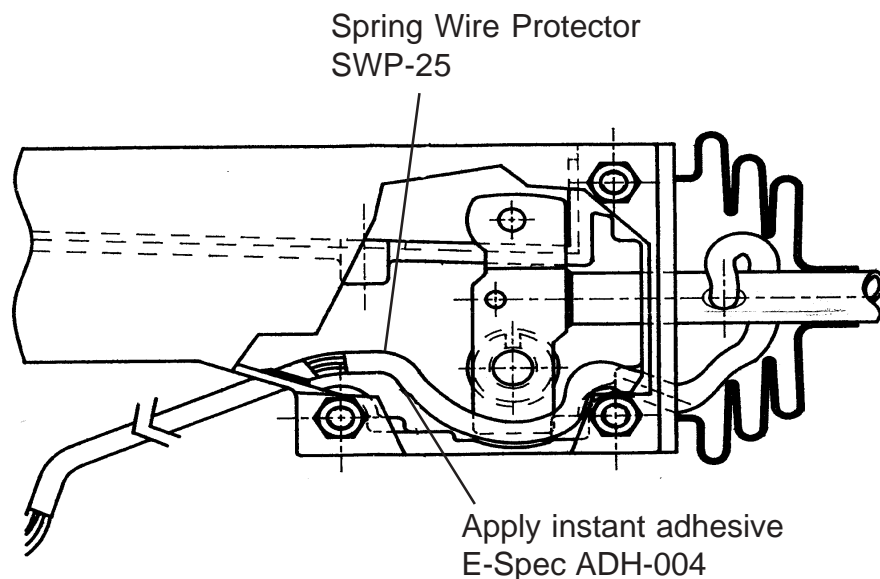
Replace rubber boot (A)

NOTE! Numbers are printed on the individual wires



NOTE! Reversing wires 2 and 3 will not harm the system. It will only reverse the two functions of the switch.

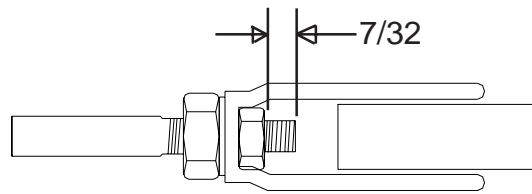
If replacing wire harness, refer to the picture shown below:



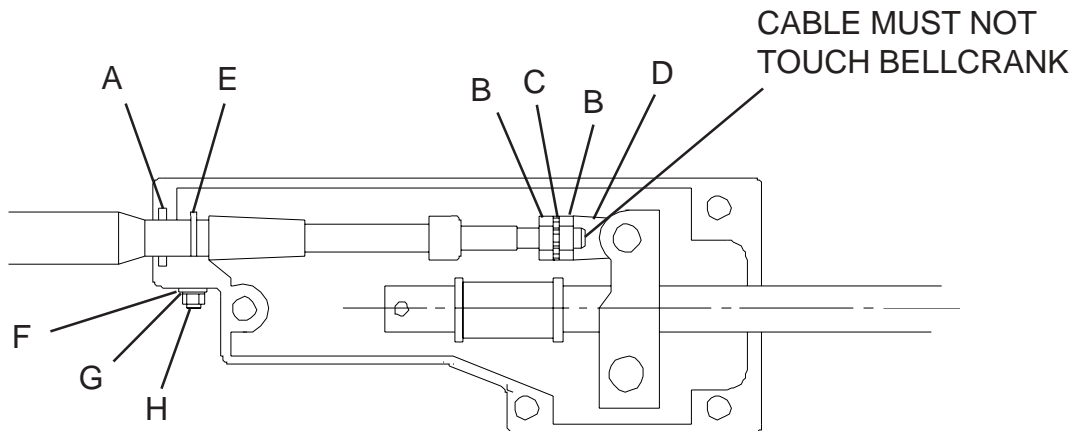
Control Lever Cable Adjustment

Installation of new speed control cable

- 1) Slip "O" Ring **(A)** over Cable and push past the groove in the EndCap.
- 2) Install Hexnut **(B)** and Lockwasher **(C)** approximately 1/2" from end on Cable Threaded Rod.
- 3) Install Clevis **(D)** and Clevisnut **(B)** on Cable. Cable Rod End should extend beyond Clevis Nut as shown. Tighten the Jam Nut **(B)**.



- 4) Slip the Clevis **(D)** over the Bellcrank, install the Clevis Pin and secure with cotter pin.
- 5) Remove the "U" Bolt **(E)** from Housing.
- 6) Position the "O" Ring **(A)** on the Cableend Cap so when the Cable is brought down in place, the "O" Ring fits in the groove in the Housing.
- 7) Slip the "U" Bolt **(E)** over the Cable and through the Housing.
- 8) Place the Spacer **(F)** over the open end of the "U" Bolt, install the Lockwasher **(G)** and Nuts **(H)**. Torque the Nuts to 70-100 inch pounds.
- 9) Slip the Cover in place and fasten with the four Screws and CSK Lockwasher.



Flow Control Adjustment

Using the Flow Control

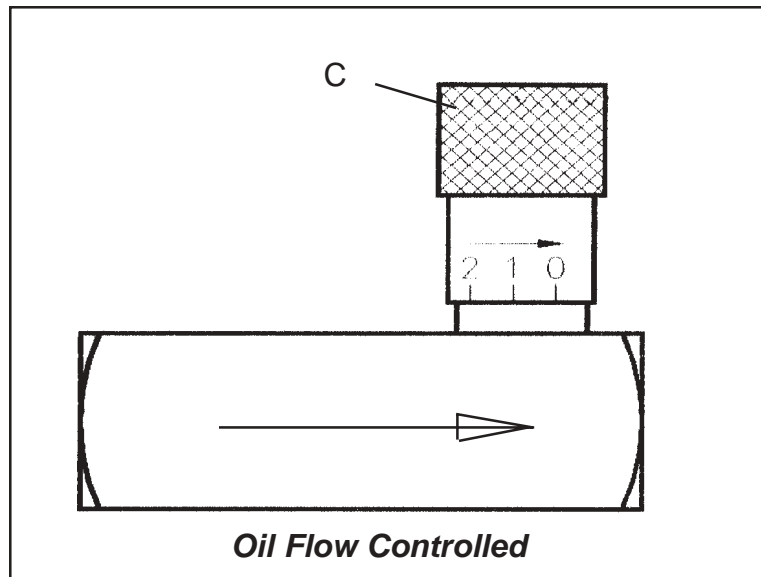
The Flow Control Valve (C) is located in the box under the operator's left arm and is used to regulate the rate of the blade descent into the cut.

WARNING: Excessive descent rates can damage diamond or abrasive blades and lead to possible bodily harm.



To adjust the Flow Control Valve:

- 1) Raise the blade by moving the Blade Elevation Switch to the left.
- 2) Lower the blade by moving the Blade Elevation Switch to the right and observe the rate of descent.
- 3) To increase the rate, turn knurled knob CCW until the desired rate is achieved. To decrease the rate, turn the knob CW



The valve controls the amount of oil flow in the blade lowering mode only. It has no effect on the blade raising speed.

EZ Saw Guide Installation and Alignment

WARNING: Engine should be completely shut down before installing guide.

- 1) Remove saw guide (A) from left side of saw by loosening angle bolt (B) and lifting up on saw guide.
- 2) Mount saw guide on frame on the right side of saw. Slide the square tube on the bottom of the guide into the receiver on the frame and threaded stud on the back of guide into "U" bracket. Tighten handle nut (C) on stud to hold guide in place.

WARNING: Be sure blade is unobstructed and not resting on the ground before starting engine.



WARNING: Keep hands and feet clear of blade at all times.

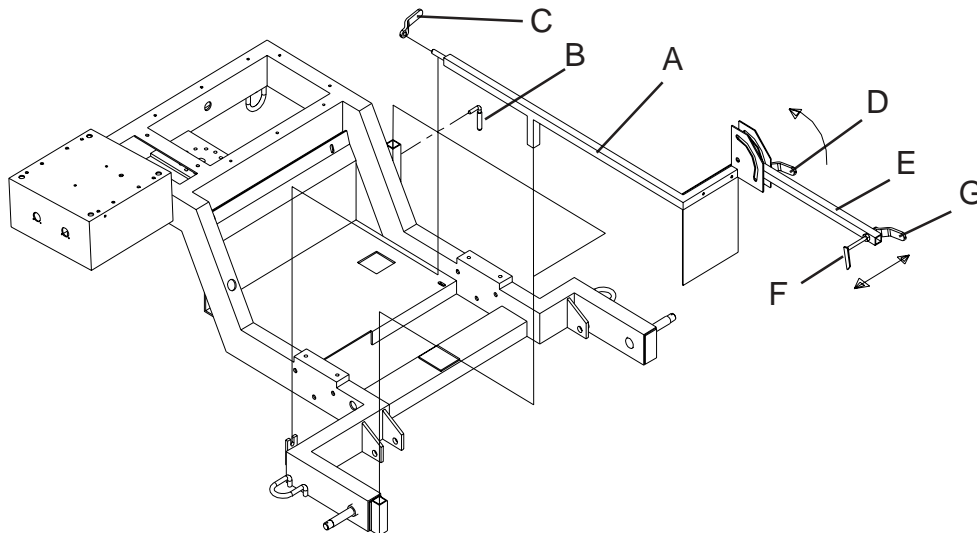


WARNING: Stop engine. Engine should be completely shut down before aligning indicator.



- 3) Loosen the handle nut (D) and rotate extension (E) until the pointer is near the ground. Retighten handle nut (D).
- 4) Adjust Pointer by loosening handle nut and turning the threaded indicator to move it left or right. Adjust the pointer so that it is directly in line with the blade.

Note: Make sure all three handle nuts are tight before operating saw.



Hooking up Water to Saw

Prior to starting the engine you should hook up the water hose and visually inspect to make sure that water is flowing to the blade. Hook up your hose to the coupling on the back of the saw and turn on your water source. Then open the Water Valve below the steering wheel.

Note: Water flow volume is metered with the Flow Control Valves below the seat.

WARNING: Make sure that engine is completely shut down before removing
bladeguard.



Visually inspect the water tubes to make sure that water is flowing from each of the six water ports. To do this, the bladeguard must be removed. If any of the holes are blocked you can remove the water tube plugs and flush impurities from the tube.

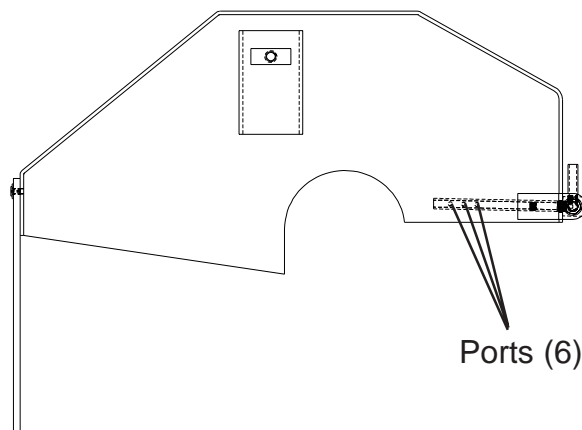
Reinstall bladeguard making sure L-bolt is secure.

Adjust Water Flow to Joint Cleaner and Blade

Note: The Water Valve (near the steering wheel) is an ON/OFF control, not a metering device. Use the Flow Control Valves for flow adjustments.

The Flow Control Valves are located under the drivers seat. They will independently adjust the flow to the Joint Cleaner and the Blade. Turn the flow control valves CCW to increase water flow - CW to decrease water flow.

By presetting the flow control valves, you only need to hit the water valve when approaching a cut. There is no need to carefully adjust flow with the Water Valve when beginning each cut.



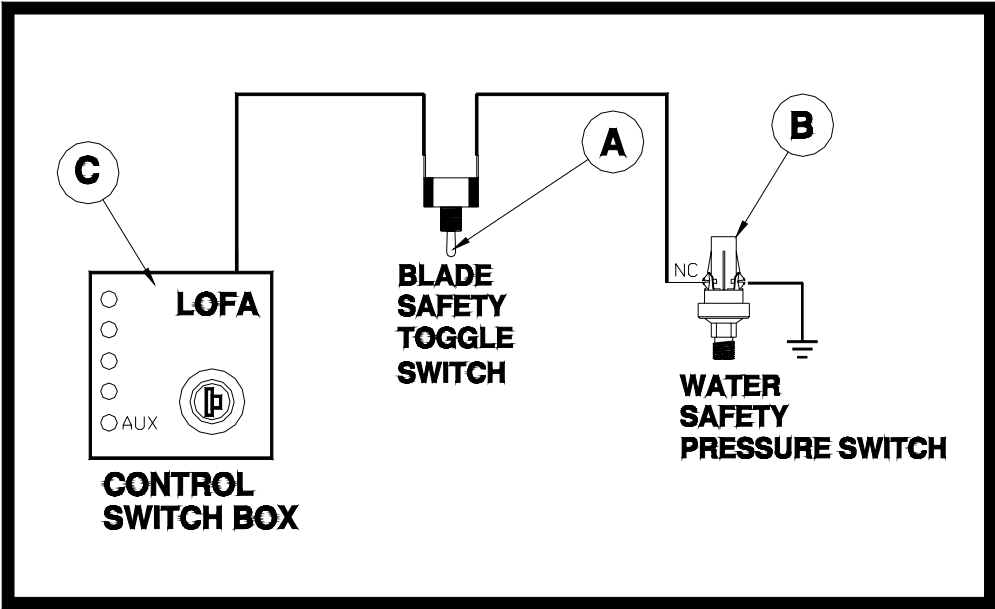
Using the Blade Safety Switch

The Blade Safety Switch is a switch that stops the engine automatically when water pressure drops below 4 PSI. The safety switch protects the blade should the water supply become interrupted or inadequate. When water pressure is restored, the switch is automatically reset.

To start the engine the blade safety switch must be in the "OFF" position, unless there is adequate water pressure.

Leave in the "OFF" position for dry cutting with abrasive blades.

NOTE: When the water PSI drops, PSI switch (B) activates the Aux. terminal of Controller (C). There is approximately a 5 second delay before the engine will shut down.



Depth Stop Adjustment

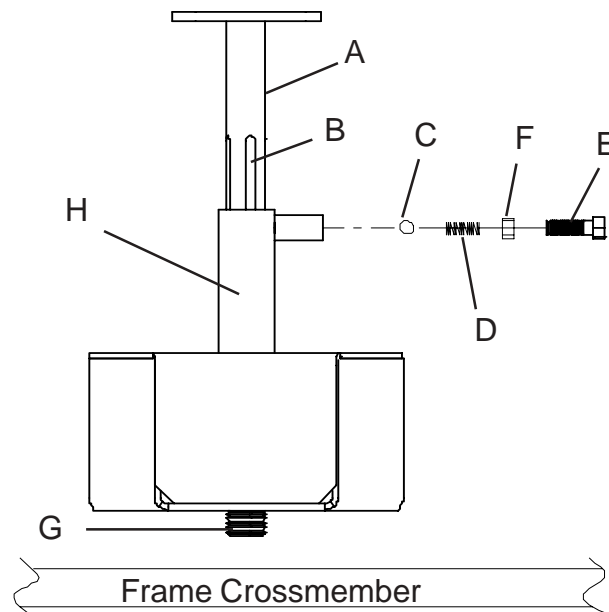
The Depth Stop is located between the engine and the fuel tank. It can be reached and adjusted without leaving the operators seat. There is no lock to release because the rod is held in place by a ball detent.

Adjusting Sawing Depth

NOTE: The depth stop has four detents that "click" into position each 1/4 turn. Turn the handle (A) CCW (counterclockwise) for a deeper cut, CW (clockwise) for a less depth.

- 1) Lower the blade **slowly** until it just reaches the pavement. Turn the handle (A) clockwise until the threaded rod contacts the frame crossmember.
- 2) Raise the blade and turn handle (A) CCW to increase sawing depth. Lower blade **slowly** into the concrete until it stops and check cutting depth.
- 3) Repeat this process until the desired depth is obtained.

NOTE: **DO NOT** attempt to turn handle (A) when the bottom of adjustment rod (G) is in contact with the frame crossmember.



How it works - The handle (A) is held in place by the spring (D) applying pressure against ball (C) and forcing it into the detent slot (B). The retaining bolt (E) and jamnut (F) are factory set to apply the correct amount of force.

NOTE: if adjustment rod is replaced, remove the ball and spring assembly first or it will fall into tube (H). When assembling, install rod before inserting ball and spring.

Lubrication and Replacement Filters

Note: We recommend a quality grease with a moly additive.

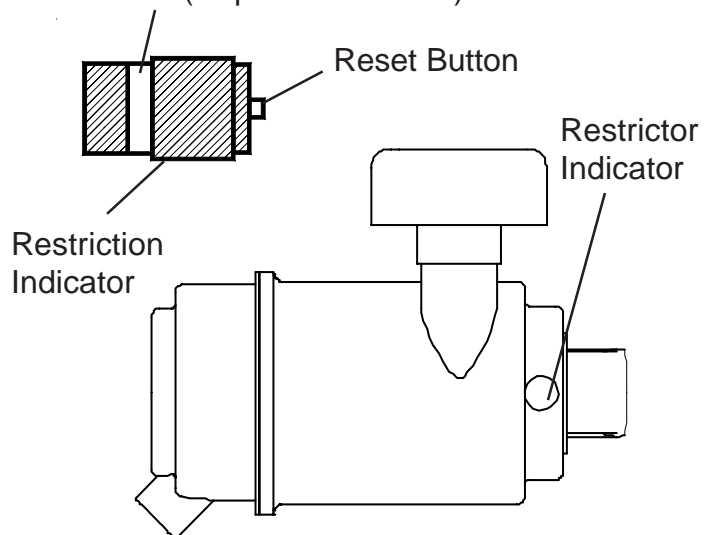
Lubrication Point	Daily	25 Hrs	Weekly	Annually
Arbor Bearings (2) on front of saw.	◆			
Outboard Bearing inside top of beltguard.		◆		
Pivot Bearings (2) at operator's foot and on opposite side.			◆	
Front Weels (2)				◆

Filter Component	P/N	Frequency
Suction Strainer - Wire mesh strainer on bottom, left of reservoir	170350	Clean Annually
Return Filter - Spin on element under seat	170102	Initial change 50 hrs. Then replace annually
Oil Filter - On front of Deutz engine	110729	Refer to Deutz engine manual
Fuel Filter - On front of Deutz engine	110688	Refer to Deutz engine manual
Primary Air Filter - Left side of unit	110985	Refer to Restrictor Indicator
Secondary Air Filter - Left side of unit	110986	Refer to Restrictor Indicator

The engine air cleaner draws air through the filter elements. The indicator measure the vacuum required to pull air through the elements. The more clogged the elements get, the more vacuum required. Once the clear area turns red, the filters are too clogged to be effective. REPLACE filters and push RESET button to turn area clear again.

Clear Area (Good)

Turns Red (Replace Elements)



Maintenance

Scheduled Maintenance

Initial Maintenance After Break-In Period	After First Hr	Daily	50 Hrs
Use a CD/SE or CD/SF oil			
Change Oil/Oil Filter. Check for oil leaks.			◆
Use fuel meeting ASTM D 975-1:1-D and 2-D specifications. Do NOT run tank dry.			
Change Fuel Filter			◆
Check V-belt tension, valve clearance and engine mounting			◆
Use a high quality MV32 or ISO 68 hydraulic oil.			
Check Hydraulic Fluid. Check for oil leaks.	◆		
Change the Hydraulic Return Filter Element			◆
Check filler cap to verify correct oil volume		◆	

Maintenance	Daily	25 Hrs	50 Hrs	100 Hrs
Check engine oil	◆			
Check air cleaner - shake out loose dirt	◆			
Check arbor bearings - DO NOT over grease	◆			
Check hydraulic oil level	◆			
Check air cleaner connections	◆			
Check belt tension and condition	◆			
Inspect blade shaft, pin and collars		◆		
Grease output shaft bearing		◆		
Service air cleaner element			◆	
Inspect sheaves for wear and cracks			◆	
Change engine oil and filter				◆

Inspect and Adjust Blade Drive Belts

- 1) Remove bladeguard by loosening L-bolt and lifting guard off mount.
- 2) Remove handlenut (A) and open beltguard door (B).

Note: Belt deflection formula is 1-64" deflection per 1" measured from center of engine shaft to center of arbor shaft.

- 3) Check belt deflection by pushing on the center of the belt.

To adjust belt tension:

- 4) Loosen four Engine Mount Bolts (C) on the outside of the frame (two on each side).
- 5) Using the supplied wrench (D), turn the Belt Tensioning Bolt (E) on the front of the frame. Turning the Belt Tensioning Bolt will cause the whole engine to move on its frame. Turn the bolt CW to loosen the belts - CCW to tighten the belts.
- 6) When proper tension is achieved, tighten four Engine Mount Bolts on the outside of the frame.

Note: To remove belts, you must completely remove beltguard (G) by removing four bolts (F) and parts shown in figure 2.

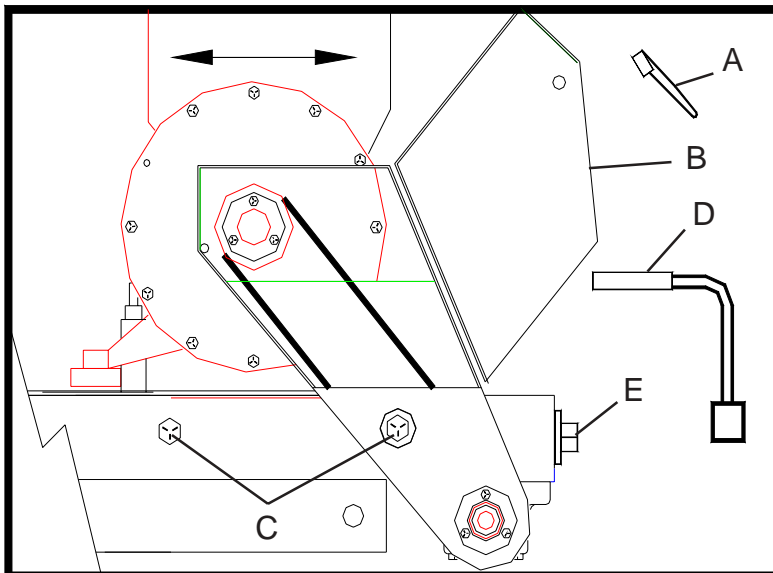


Figure 1

Notice!!
Do not over tension belts - this could lead to premature engine main bearing failure!

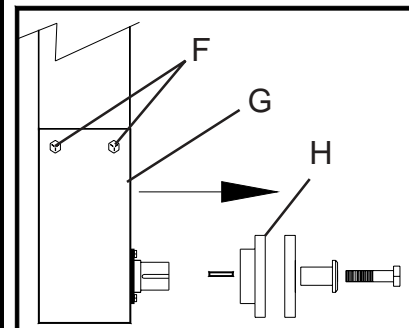


Figure 2

Maintenance

Inspect and Adjust Alternator and Hydraulic Pump Drive Belt

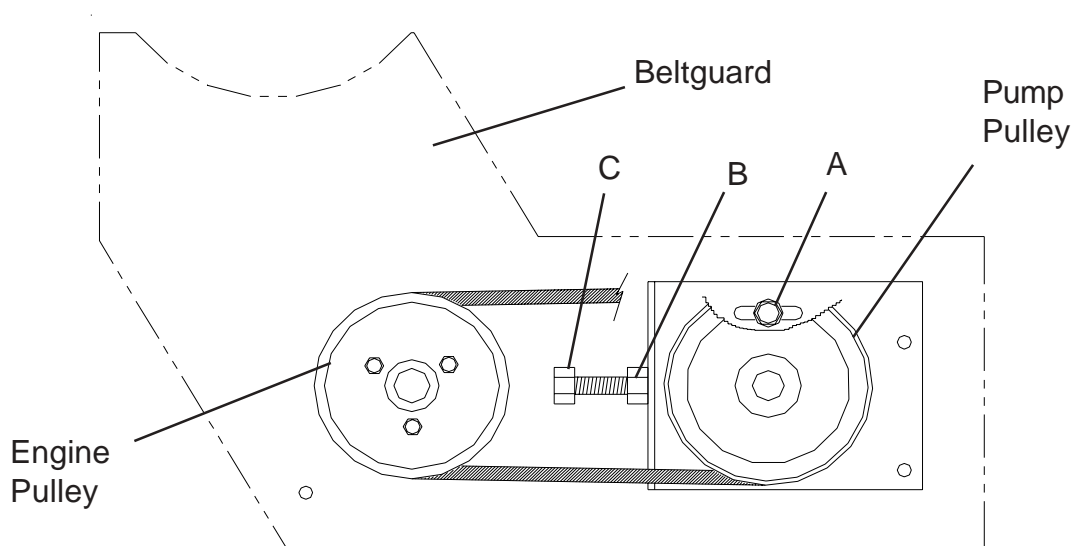
WARNING: Do not inspect belts when engine is running.



- 1) Disconnect Air Cleaner by detaching the rubber elbow from the engine intake. Leave the Air Cleaner attached to the Beltguard.
- 2) Remove Beltguard by removing two bolts on the sides and two nuts from studs on front.

Note: See section 6.5 in the Deutz Engine manual for alternator belt inspection and adjustment.

- 3) The Hydraulic Pump Belt deflection should be about 1/4".
- 4) To adjust belt tension:
- 5) Loosen the two bolts (A) on the front of the pump behind the pulley (only one wrench is required).
- 6) Locate the tension adjuster on the pump mount between the pump and the engine. Loosen the lock nut (B) and turn the adjuster (C) in to tighten belt.
- 7) Retighten A & B, reinstall the beltguard and reattach the air cleaner.



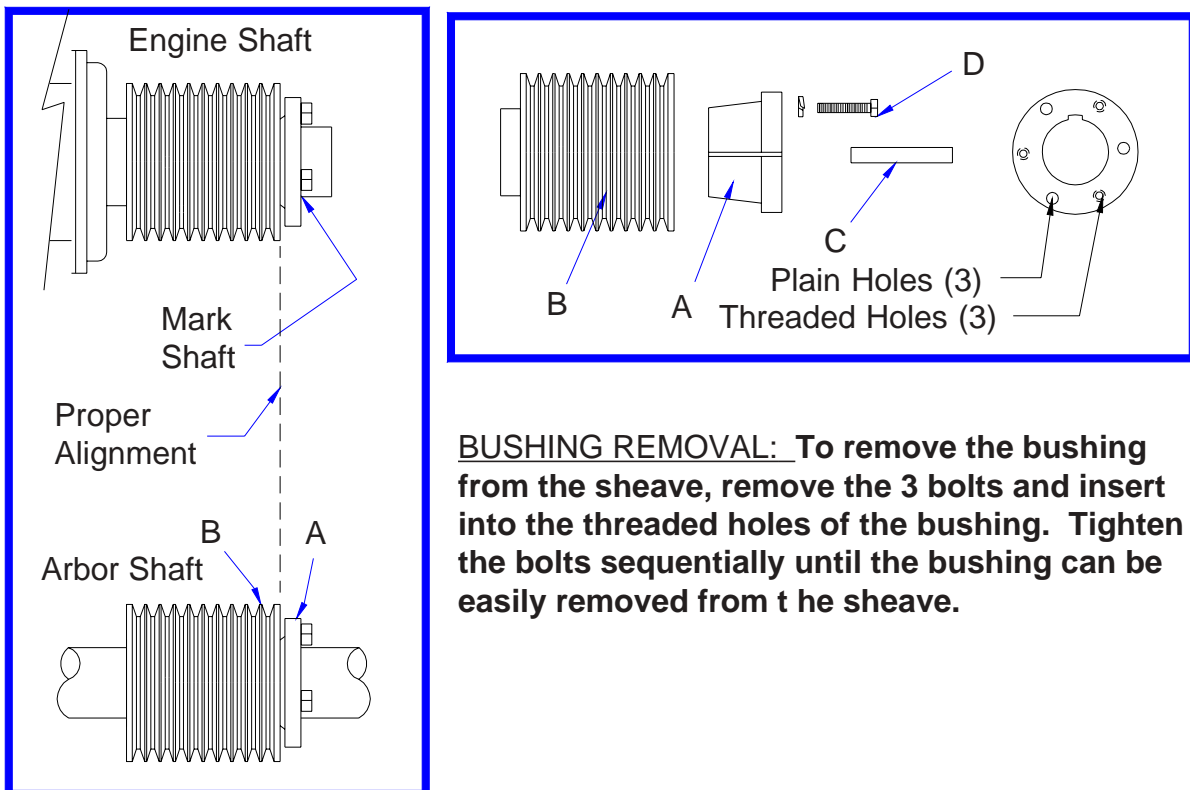
Bushing Removal and Installation

NOTE! Do Not lubricate taper, the bolts, or the sheave. Lubricating these parts could lead to breakage due to over tightening.

1. **Mark the location of the bushing (A) as shown before removing.**
2. **Remove worn or damages components.**
3. **Clean all contamination from the engine shaft or arbor shaft.**
4. **Assemble the sheave (B) and bushing (A) loosely on the shaft and insert key (C).**

NOTE! Insert the bolts (D) through the holes in the bushing WITHOUT threads and then screw them into the threaded holes of the sheave.

5. **Place the bushing in line with the mark of the old bushing and tighten the 3 bolts sequentially until each is tightened to 180 in/lb or 15ft/lbs.**
6. **Make sure the (2) sheaves are aligned. If not, loosen the sheave, relocate and tighten in correct position.**



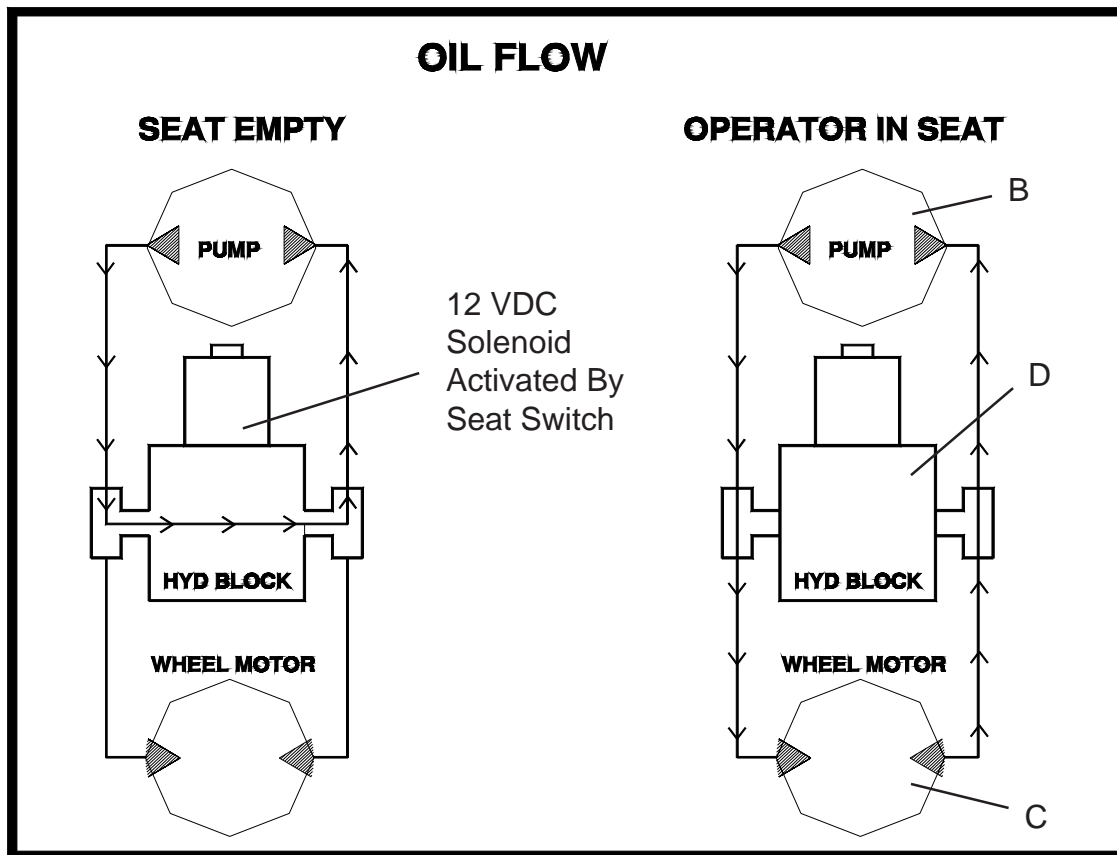
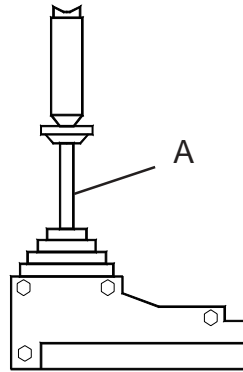
BUSHING REMOVAL: To remove the bushing from the sheave, remove the 3 bolts and insert into the threaded holes of the bushing. Tighten the bolts sequentially until the bushing can be easily removed from the sheave.

Seat Switch Operation

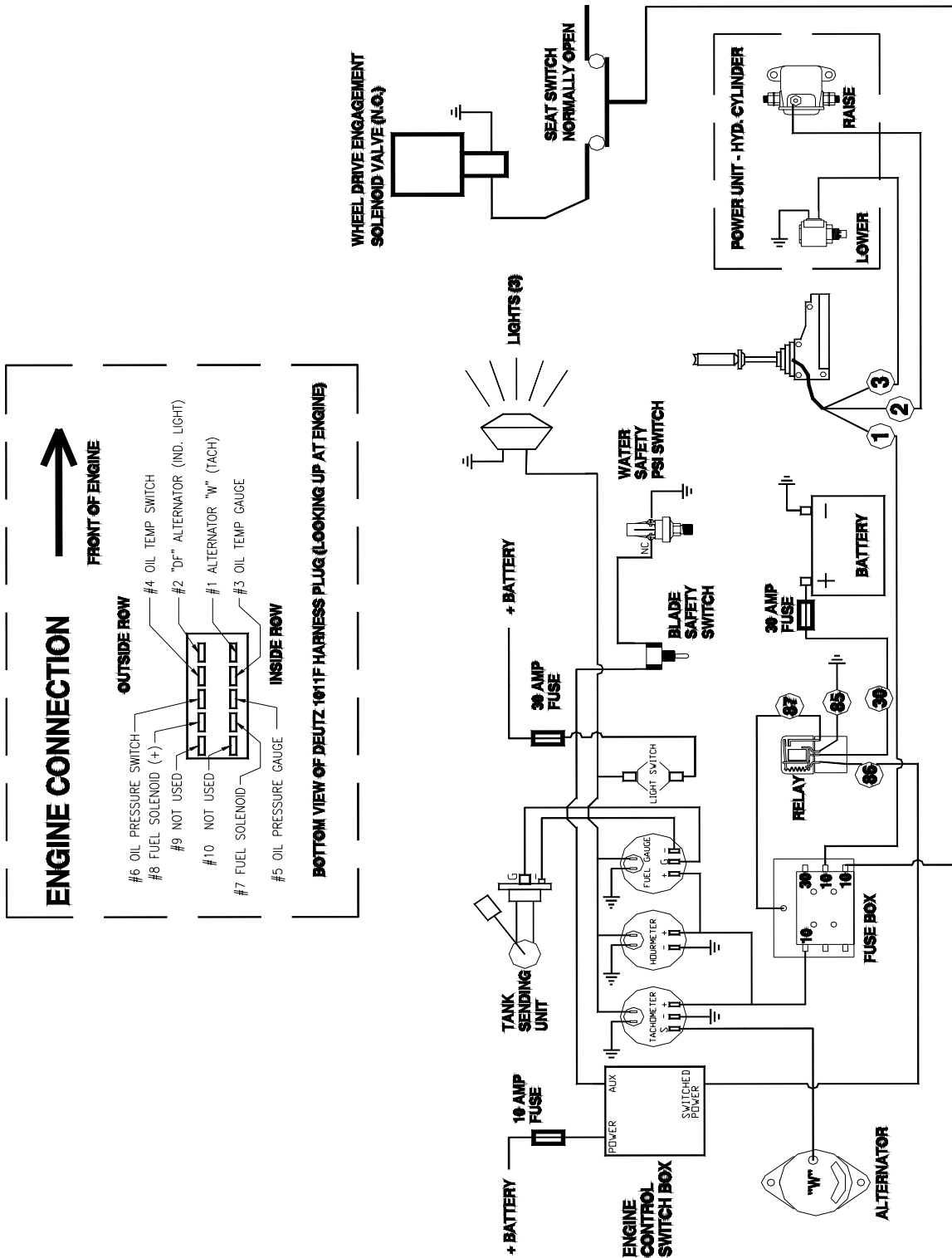
For Safety reasons, the unit will not travel forward or reverse unless there is an operator on the seat. If the control lever (A) is stroked, oil will run from the hydraulic pump (B) to the wheel motor (C). The hydraulic lines are tee'd into the hydraulic block (D).

The hydraulic flow control block is normally open, which means the oil will flow through the block instead of through the motor. (Note, oil will flow through the path of least resistance.)

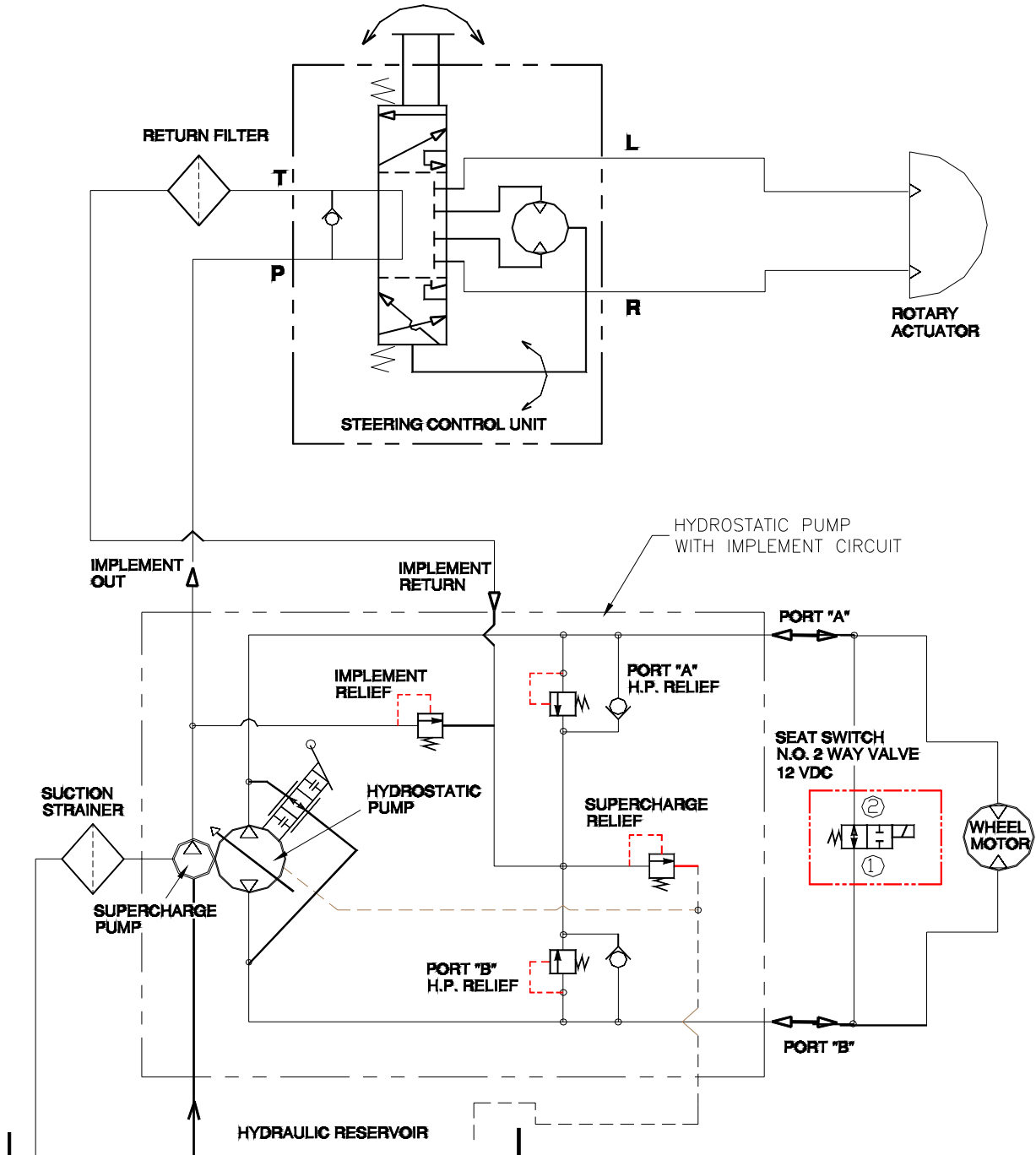
When the seat switch is activated, the valve closes and does not allow oil to pass through the block so it flows to the motor.



Wiring Diagram



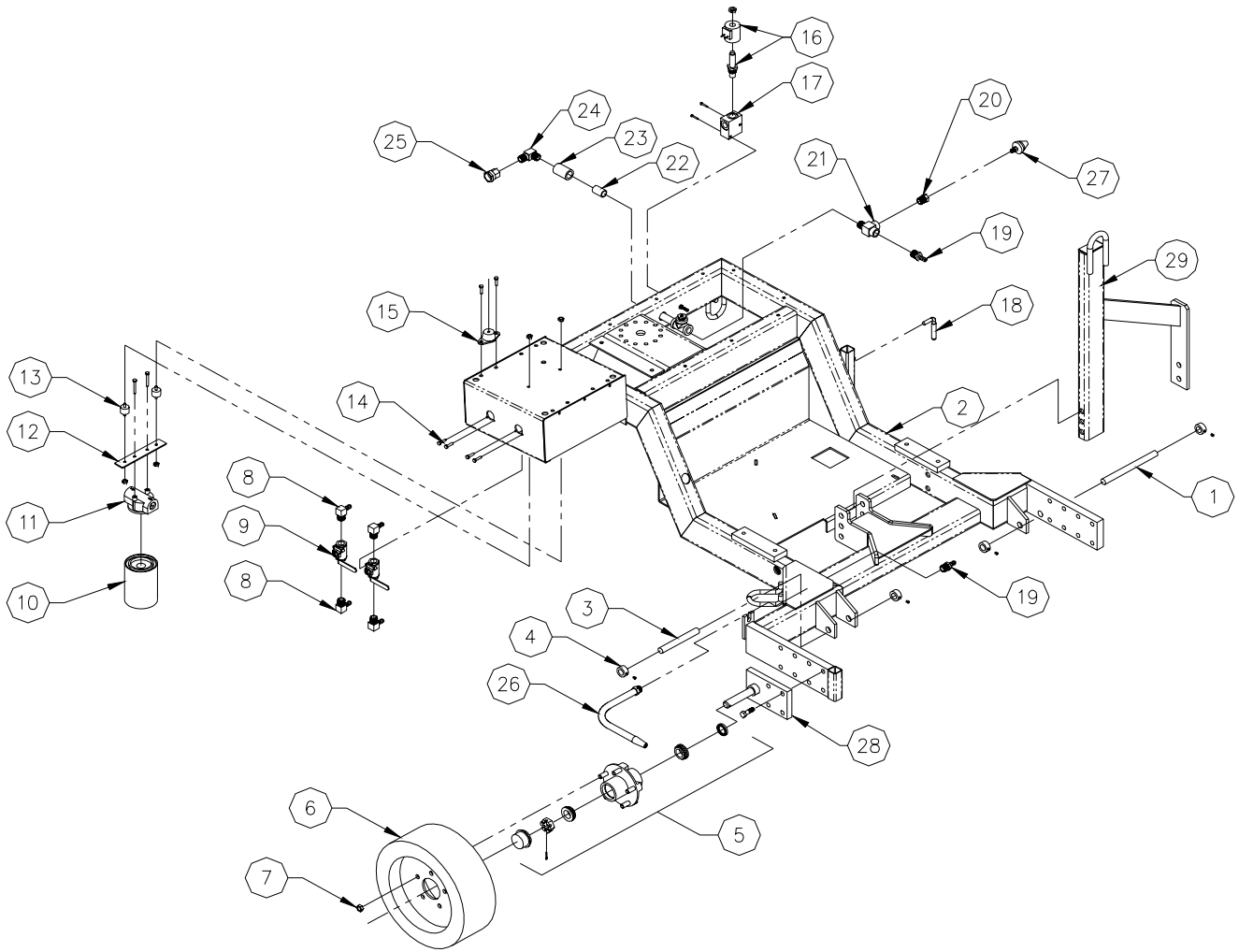
Hydraulic Schematic



Parts for Frame Components

ITEM	PART #	DP PART #	DESCRIPTION
1	419105	6043271	Cylinder Pin
2	403959	6043272	Frame Weldment
3	419447	6043273	Cylinder Pin
4	110114	2501544	Set Collar
5	140325	6043274	Hub Assy.
6	403964	2501511	Wheel Weldment
7	100135	2900975	Lugnut
8	120460	3200516	Hose Barb, 3/8 x 90
9	120651	3200026	Valve
10	170102	3200486	Filter Element
11	170207	2501552	Filter Mount
12	419240	6043275	Filter Mount Plate
13	152053	2701360	Shock Mount
14	100452	2900448	Hex Machine Screw 10-32 X 1/2" Long
15	152894	2501550	Rubber Isolator
16	170662	2701535	Cartridge
17	170660	6043297	Manifold Block
18	403504	2900001	3/8" L-Bolt
19	120453	3200517	Hose Barb, 3/8 Straight
20	120384	3200529	1/2" Hex Bushing
21	170019	3200045	Street Tee, 1/2"
22	120010	3200523	1/2" Close Nipple
23	120047	3200242	1/2" Close Coupling
24	170618	3200166	Elbow 8MP x 8MP
25	120508	3200022	1/2" Hose Coupling
26	152909	2501548	Spray Hose Assembly
27	130126	2800464	Switch-Blade Safety
28	404268	6043277	Spin
29	404239	6043276	Lift Frame

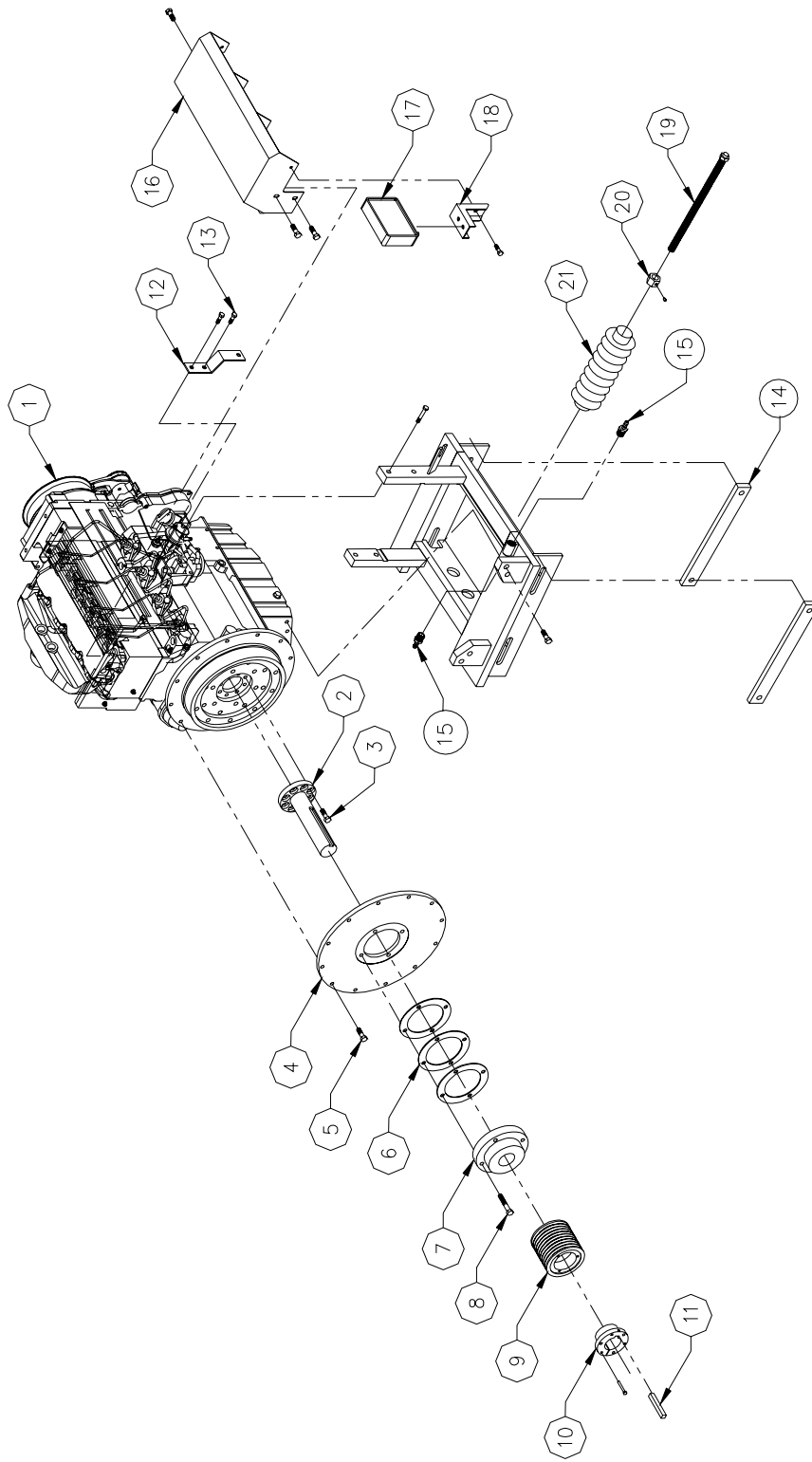
Frame Components



Parts for Engine Components

ITEM	PART #	DP PART #	DESCRIPTION
1	110977	2600145	Deutz Engine
2	403501	2501507	Output Shaft
3	100585	2900318	Hex Head Bolt M10 x 50MM Long
4	110883	6043266	Adaptor Plate
5	100546	2900315	Hex Head Bolt, M10 x 35 MM Long
6	417979	6043265	Bearing Spacer
7	110882	2501542	2" Flange Bearing
8	100029	2900974	Hex Head Bolt, 7/16 x 2 Long
9	110896	2501535	Sheave, 10/3V/4.75 QD
10	110642	2500210	Bushing SK 2"
11	110708	2501537	1/2 Key, 3-1/2 Long
12	419102	6043264	Throttle Extension Plate
13	100547	2900310	Hex Head Bolt, M6 x 20MM Long
14	120453	3200517	Hose Barb, 1/2 x 3/8 Straight
15	419204	6043267	Retainer Bar
16	403998	6043268	Blower Deflector Weldment
17	152911	2501517	Dual Beam Light
18	419241	6043269	Light Mount Plate
19	404014	2501519	Belt Adjuster Rod Assembly
20	200371	6043296	3/4" ACME Nut
21	152901	2501518	Rubber Boot Adjuster
22	403958	6043270	Engine Mount Weldment
23	120453	3200517	Hose Barb, 1/2 x 3/8 Straight
24	419204	6043267	Retainer Bar
25	152918	6043301	3/4 Plastic slide (Not shown)

Engine Components

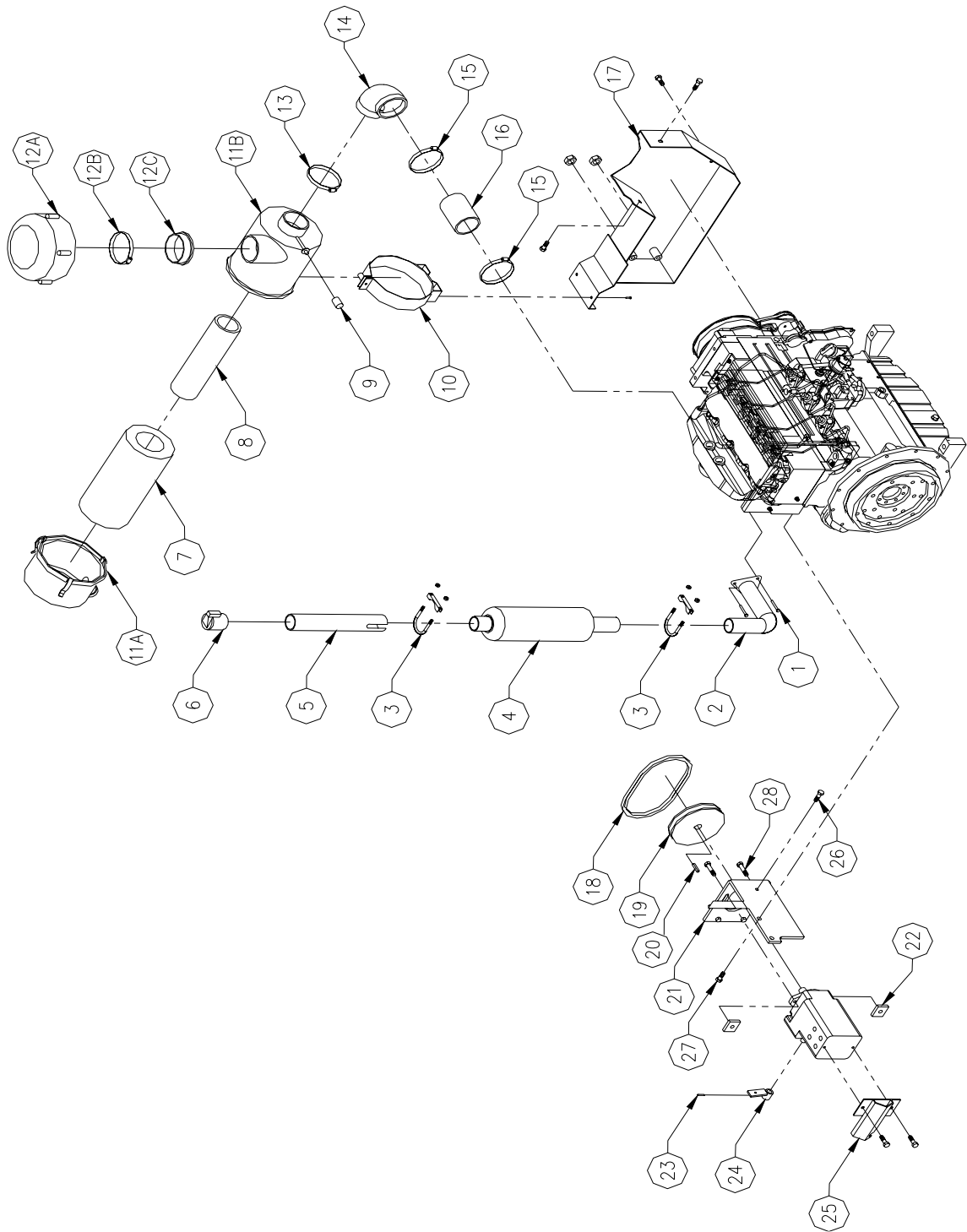


Parts for Engine Components

ITEM	PART #	DP PART #	DESCRIPTION
1	100020		3/8 NC X 2 Hex Head Bolt
2	200368	6043298	Exhaust Pipe
3	100512	2700748	Exhaust Clamp
4	152332	2700746	Muffler
5	419471	6043278	Exhaust Extension Pipe
6	110759	2700747	Rain Cap
7	110985	2501352	Outer Element
8	110986	2501353	Inner Element
9	152781	2500423	Restriction Indicator
10	110969	2501543	Mounting Band
11*	110967	2500355	Air Cleaner
12	110968	2501504	Pre-Cleaner
13	152330	3200197	Clamp
14	110970	2500458	Rubber Elbow
15	152633	3200198	Hose Clamp
16	417067	6043300	Air Tube
17	403950	6043279	Pump Beltguard Weldment
18	110974	2701506	Belt (A-34)
19	200370	2501551	5.75 Pulley
20	110711	2501538	1/4 x 1-3/8 Long Key
21	403947	6043280	Transmission Mount Weldment
22	419103	6043281	Transmission Retainer
23	100260	2900976	Spring Pin
24	403951	6043282	Pump Connector Lever
25	403952	6043283	Cable Bracket
26	100250	2900542	1/2 NC x 3-1/2 Full Thread Hex Bolt
27	100627	2900973	14 x 40mm Hex Head Bolt (Class 10.9)

* air filter without precleaner and without strap but with elements

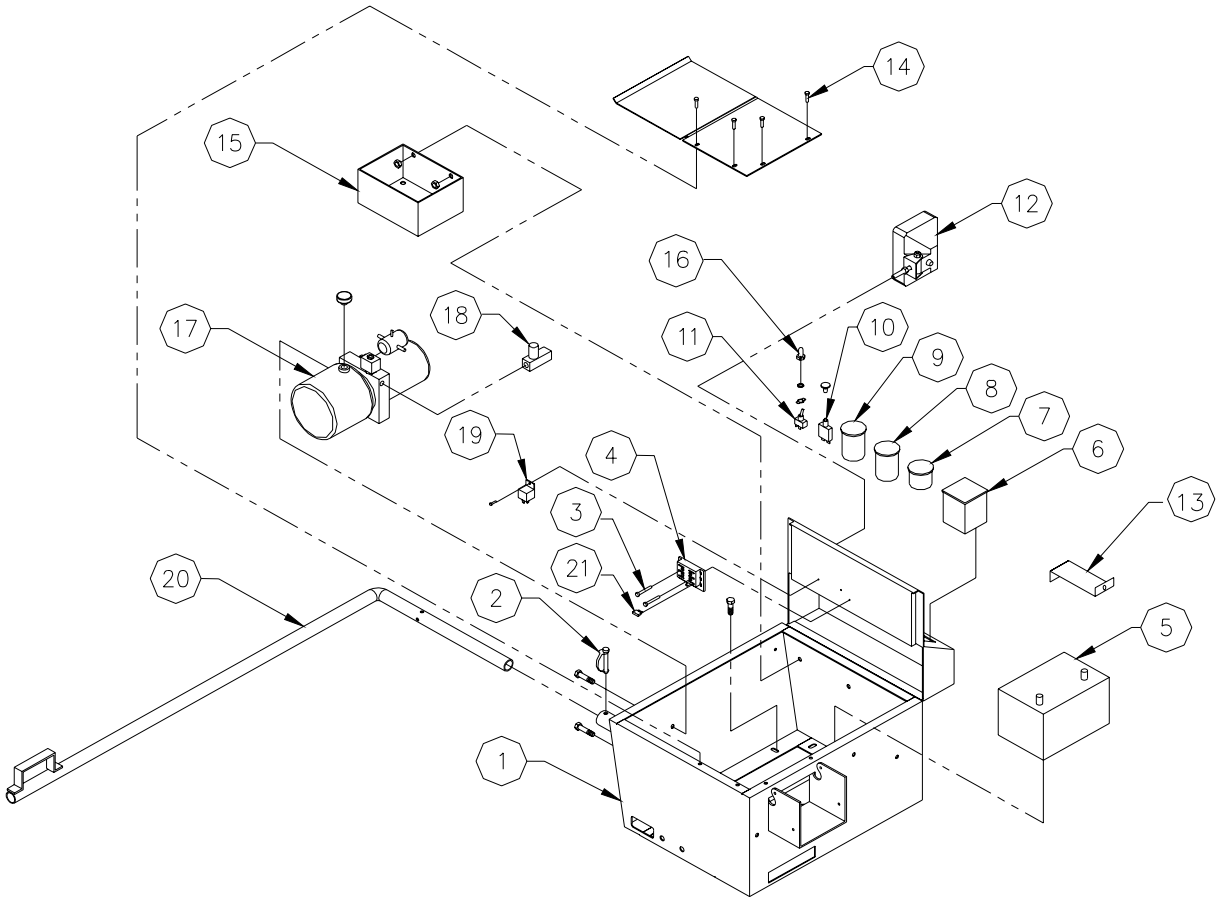
Engine Components



Parts for Console Components

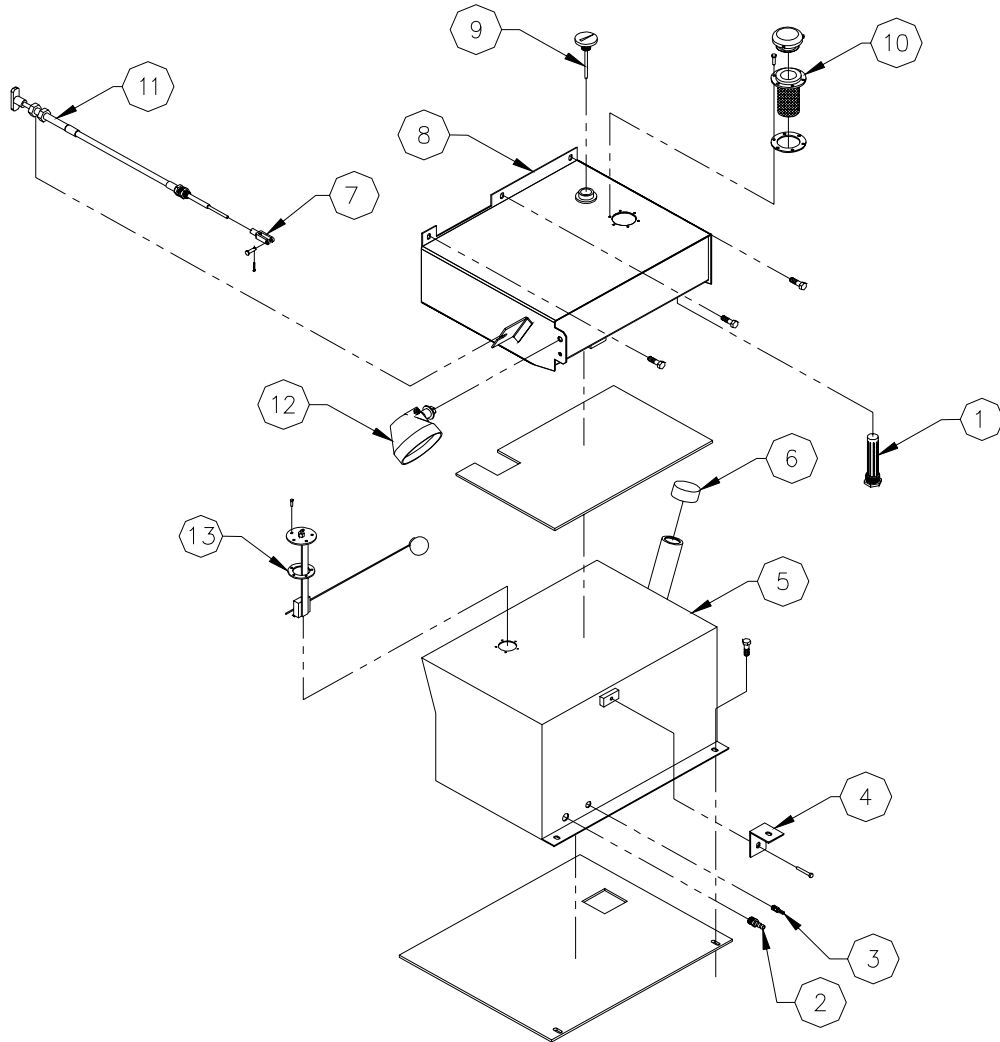
ITEM	PART #	DP PART #	DESCRIPTION
1	403973	6043260	Console Weldment
2	150124	2900257	Lock Pin
3	100452	2900211	Machine Screw #10-32 x 1/2"
4	130180	2800388	Fuse Panel
5	150212		Battery
6	111034	2701361	Micro Panel
7	130176	2800457	2" Tachometer
8	130178	2800458	Fuel Gauge
9	130107	2800460	Hourmeter
10	130175	2800471	Push/Pull Switch
11	130122	2800470	Toggle Switch
12	152911	2501517	Dual Beam Light
13	419107	6043261	Battery Hold Down Strap
14	100589	2900144	Machine Screw #1/4-20 x 3/4"
15	419446	6043262	Tool Box
16	130116	2800063	Rubber Boot Switch
17	170473	2600329	Power Unit W/Solenoid
18	170418	3200528	Flow Control Valve
19	130113	2800456	Relay
20	403978	6043263	Hose Support Tube Weldment
21	152883	2800389	10 Amp Fuse
22	152907	2800469	30 Amp Fuse

Parts for Console Components



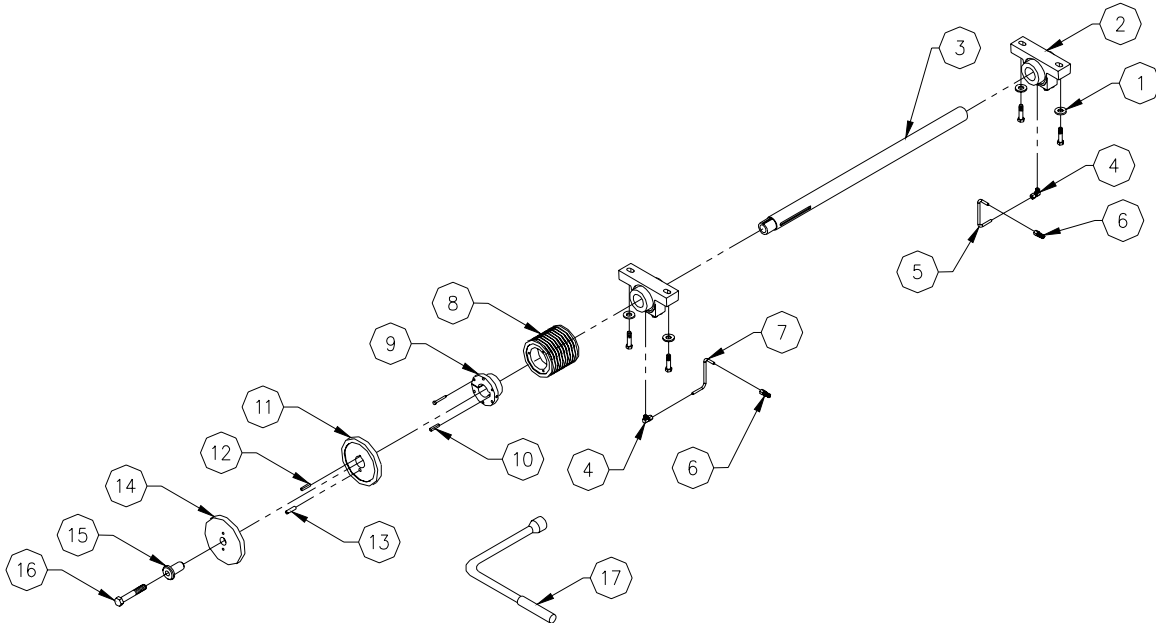
Parts for Tank Components

ITEM	PART #	DP PART #	DESCRIPTION
1	170350	3200522	Suction Strainer
2	120115	3200518	Hose Barb, 3/8 x 3/8 Straight
3	120462	3200018	Hose Barb, 1/8 x 1/4 Straight
4	419238	6043256	Tank Connector Plate
5	403960	6043257	Fuel Tank Weldment
6	152124	2500199	Gas Tank Cap
7	152084	2900603	Cable Clevis
8	403955	6043258	Hydraulic Reservoir
9	130020	2800459	Thermometer
10	152044	2501545	Filler Cap
11	152905	2501510	Throttle Cable
12	152183	2501549	12V Light
13	130177	2501546	Sending Unit



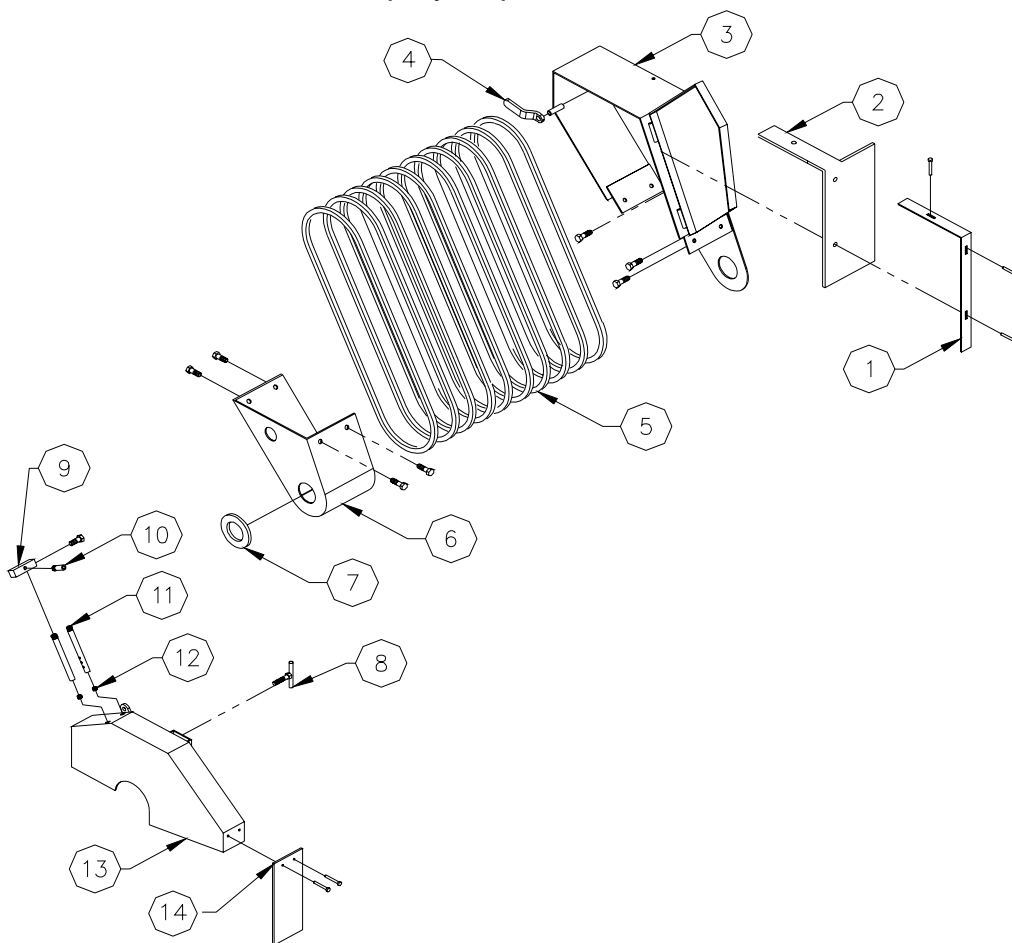
Parts for Arbor Components

ITEM	PART #	DP PART #	DESCRIPTION
1	100508	2900058	1/2" Heavy Washer
2	111063	2501520	2" Pillow Block
3	420026	6043286	2" Arbor Shaft
4	120092	3200525	1/4 x 1/8 Male Elbow
5	419112	6043299	Grease Tube, Right
6	120089	3200524	1/4 x 1/8 Male Connector
7	419111	6043295	Grease Tube, Left
8	110896	2501535	Sheave, 10/3V/4.75 Q.D.
9	110642	2500210	Bushing, SK 2"
10	110708	2501537	.50" Key x 3-1/2" Long
11	416911	6043259	Inside Collar
12	110711	2501538	1/4" Key 1-3/8" Long
13	416844	2501516	Blade Pin 1-3/8"
14	416944	6043284	Outside Collar
15	416996	6040252	Stub Shaft
16	100483	2900146	5/8 NC Hex Bolt, 4" Long
17	404033		.937 x 90 Wrench
18	420076	6043294	Grease Tube, Top Left (Not shown)
19	420077	6043293	Grease Tube, Top Right (Not Shown)



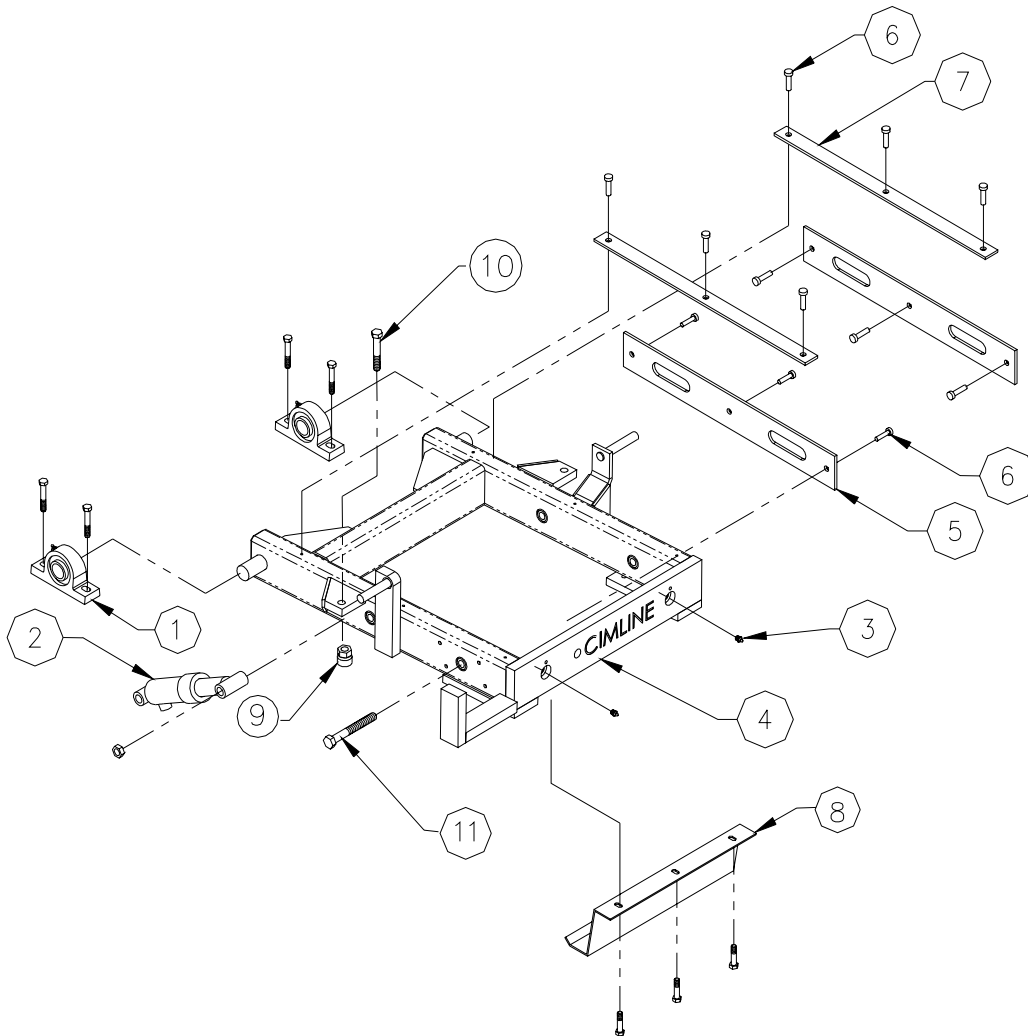
Parts for Drive Guard Components

ITEM	PART #	DP PART #	DESCRIPTION
1	419239	6043251	Beltguard Retainer Flap
2	152257	6043252	Spray Flap
3	403962	6043253	Upper Beltguard
4	152898	2501505	Handle Nut
5	110881	2501009	5X3VX530 Belt
6	403961	6043254	Lower Beltguard
7	153053	6043292	Shaft Seal
8	404202	6043291	T-Bolt
9	417028	6043290	Waterblock
10	120513	3200527	Inlet Nipple
11	416987	6043289	14" Spray Tube
12	100505	2900036	.31 x .25 Long Soc Set Screw
13	403948	6043288	Bladeguard Weldment
	403968	2501514	Blade Guard Assy. (Items 9-14)
	403216	6043287	Water System Assy. (Items 9-12)
14	152910	6043255	Spray Flap



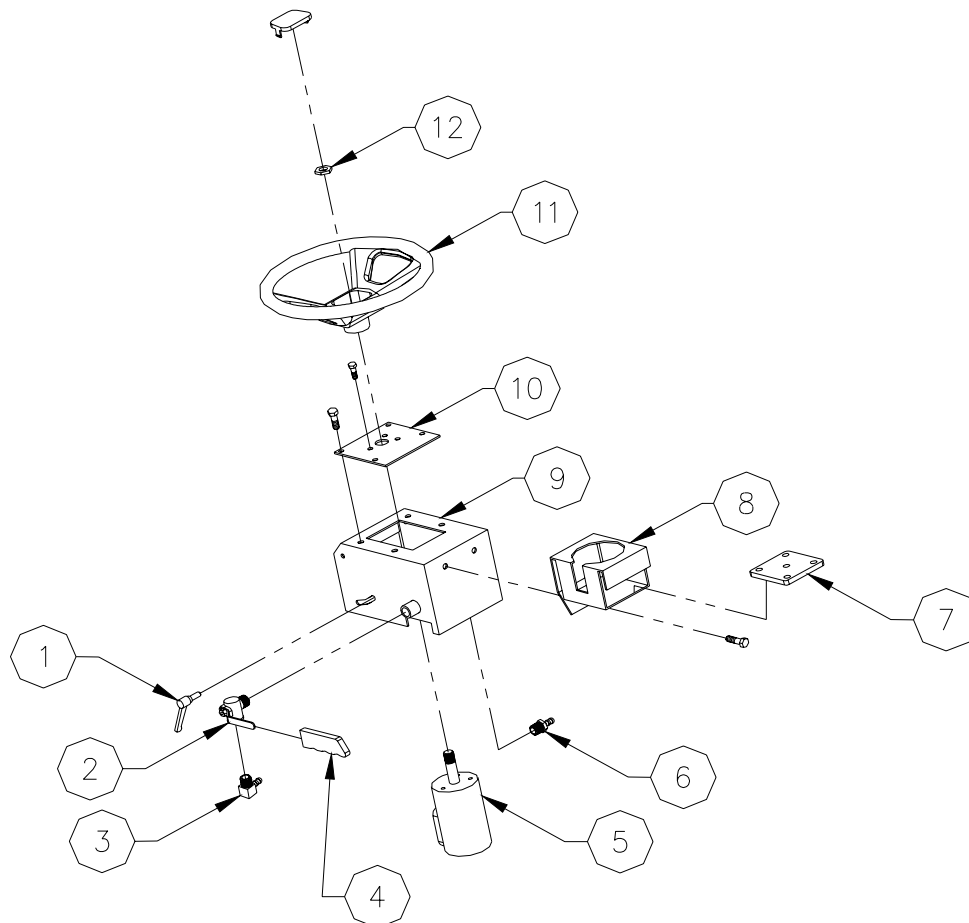
Parts for Lift Components

ITEM	PART #	DP PART #	DESCRIPTION
1	110073	2501531	1-3/8" Pillow Block Bearing
2	170646	2501541	1-3/4 x 5 Hydraulic Cylinder
3	150565	2900062	1/8 NPT Grease Zerk
4	403957	6043247	Engine Frame
5	152904	6043248	Side Motor Slide
6	100599	2900972	1/4 NC Flat Head Screw, .62" Long
7	152903	6043249	Top Motor Slide
8	420033	6043250	Arbor shield Plate
9	153110	2900476	3/4" Toggle Pad
10	100654	2900480	3/4" Hex Head Bolt, 6" Long
11	100047	2900099	5/8" Hex Head Bolt, 3-1/2 Long



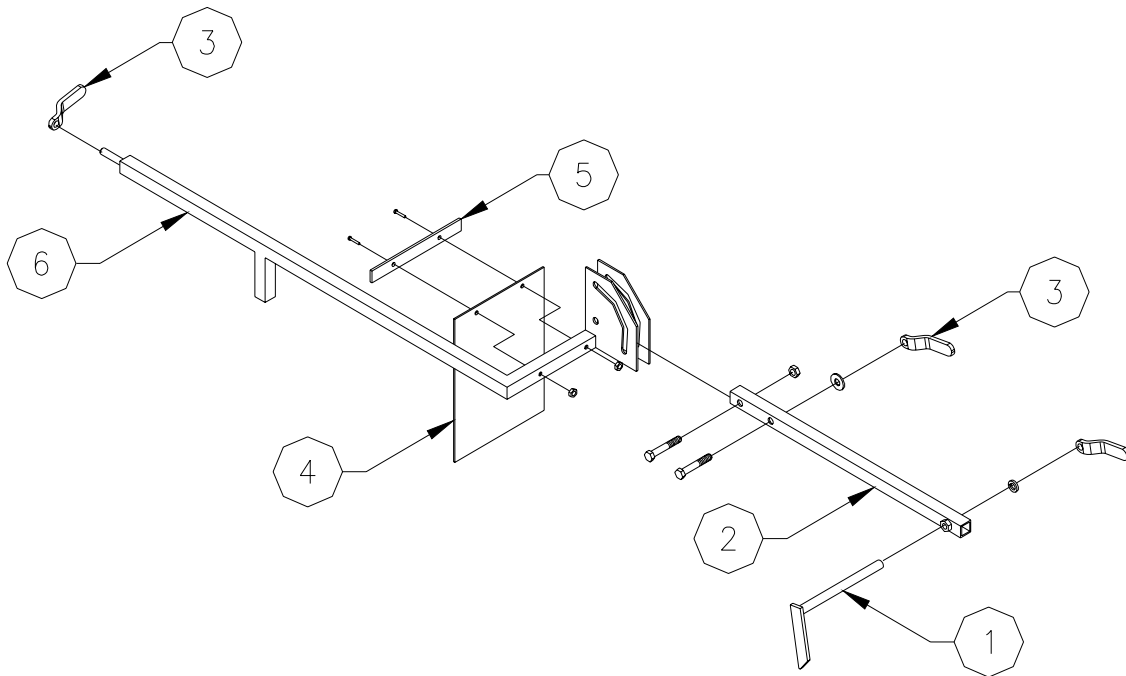
Parts for Steering Components

ITEM	PART #	DP PART #	DESCRIPTION
1	152705	2500577	Lever
2	120641	3200521	Ball Valve
3	120460	3200516	Hose Barb, 1/2 x 3/8- 90
4	152038	2501540	Flat Handle Grip
5	170659	2600334	Steering Unit
6	120453	3200517	Hose Barb, 1/2 x 3/8 Straight
7	152890	6043243	Center Cover
8	403979	6043244	Cup Holder Weldment
9	403969	6043245	Steering Mount Weldment
10	419251	6043246	Steering Mount Plate
11	152888	2501170	Steering Wheel
12	100632	2900435	M16 Nut



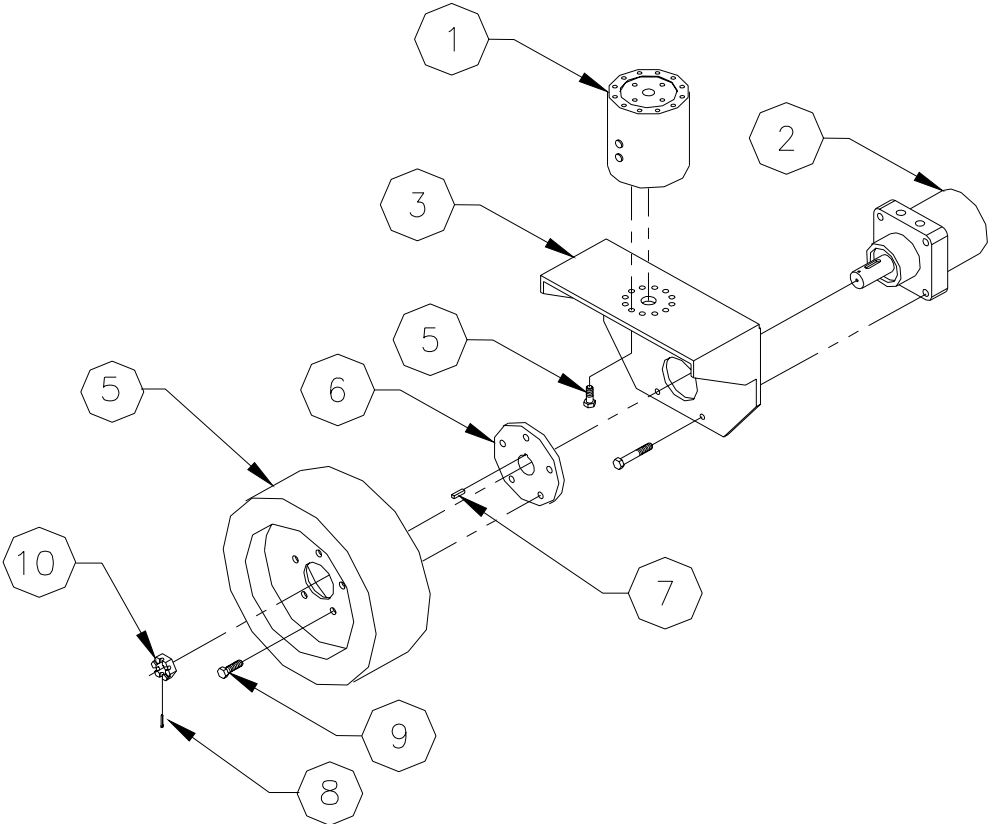
Parts for Guide Components

ITEM	PART #	DP PART #	DESCRIPTION
	403954	6043240	Guide Assy. (Item 1-6)
1	403153	2501513	Rear Line Pointer
2	403977	6043238	Indicator Arm Weldment
3	152898	2501505	1/2" Handle Nut,
4	153071	6043242	Slurry Flap
5	419109	6043241	Slurry Flap Retainer
6	403953	6043239	Guide Weld Frame
	403954	6043240	Guide Assy. (Item 1-6)



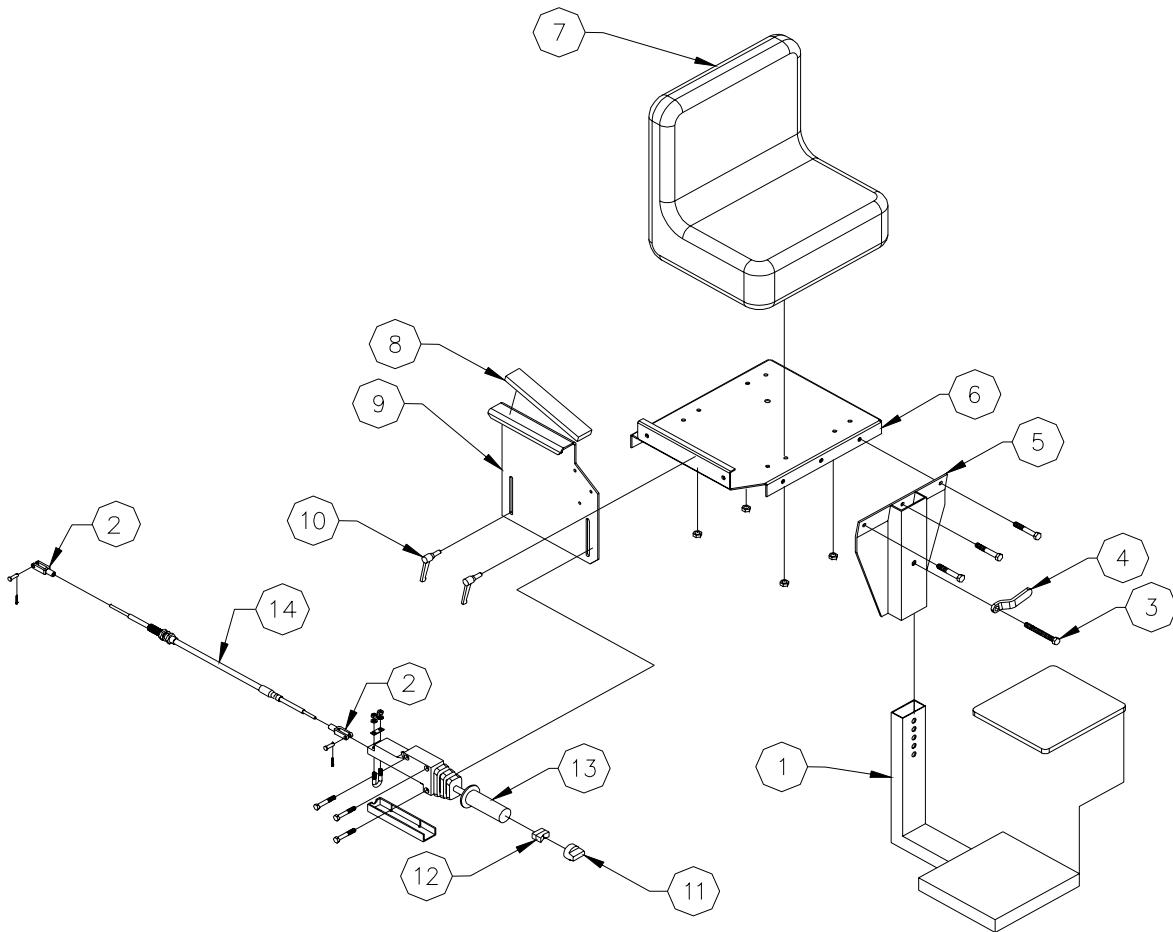
Parts for Rear Drive Components

ITEM	PART #	DP PART #	DESCRIPTION
1	170655	2501530	Rotary Actuator
2	170661	2600325	Motor Wheel
3	403963	6043237	Wheel Bracket
4	100619	2900192	1/2 Square Head Screw, 2-1/4" Long
5	403964	2501511	Wheel
6	140457	2501512	Wheel Hub
7	111041	2501536	Key, .31 x .88 Long
8	100325	2900971	Cotter Pin .12 x 2" Long
9	100616	2501534	Wheel Bolt, .50 x 1.31 Long
10	100638	2701903	Castle Nut, 1-20 UNF



Parts for Seat Components

ITEM	PART #	DP PART #	DESCRIPTION
1	403975	6043233	Footrest Weldment
2	152084	2900603	Cable Clevis
3	100250	2900542	Hex Bolt, 1/2 x 3-1/2 Long Full Thread
4	152898	2501505	1/2" Handle Nut
5	403974	6043234	Foot rest Weldment
6	403967	6043235	Seat Mount Weldment
7	152895	2501547	Seat With Switch
8	153074	2501539	Arm Rest Top
9	419992	6043236	Arm Rest Plate
10	152705	2500577	Adjustable Lever
11	152524	2501503	Switch Boot
12	152523	2501502	Rocker Switch
13	152896	2501501	Speed Control Stick (Incl. Item 11&12)
14	152088	2501506	Speed Control Cable





Limited Warranty

LIMITED WARRANTY

ALL EQUIPMENT MANUFACTURED BY US IS PRE-RUN AND TESTED BEFORE LEAVING OUR PLANT, AND IS SHIPPED IN GOOD WORKING ORDER AND CONDITION. WE, THEREFORE, EXTEND TO PURCHASERS THE FOLLOWING LIMITED WARRANTY WHICH IS TO EXCLUDE AND TAKE THE PLACE OF ANY OTHER GUARANTY OR WARRANTY EITHER EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND WHETHER WRITTEN OR VERBAL:

- 1) Except as provided in paragraph 2 hereof and except as specifically set forth in the detailed specifications of any equipment manufactured by DIAMOND PRODUCTS, should any defect of material or workmanship arise, within one year of the purchase, we undertake, at our option, to replace or repair the defect or, at our option, to substitute other equipment for the defective equipment, provided written notice is given to us as soon as the defect is discovered or within 7 days thereafter. Our sole responsibility is in all events limited to the foregoing. This limited warranty does not apply to defects caused by accident, misuse, neglect, or ordinary wear and tear, nor do we assume any liability in cases where any alterations have been executed without our knowledge and consent, nor shall we be liable for any equipment failures resulting from improper installation or operation of the equipment.
- 2) Such parts of DIAMOND PRODUCTS equipment as are manufactured by parties other than DIAMOND PRODUCTS are subject solely to the guarantees or warranties of the original manufacturer of the equipment parts.
- 3) Any equipment furnished by DIAMOND PRODUCTS and damaged in transit is not the responsibility of DIAMOND PRODUCTS. A claim must be made by the purchaser against the carrier for said damages, including notation of damages on carrier bill of lading at the time of delivery.
- 4) Any service or repairs to DIAMOND PRODUCTS equipment other than service or repairs authorized by DIAMOND PRODUCTS nullifies this limited warranty.
- 5) All claim notices to DIAMOND PRODUCTS pursuant to this limited warranty must be in writing and sent to DIAMOND PRODUCTS by certified or registered mail with return receipt requested addressed as follows:

DIAMOND PRODUCTS, 333 Prospect Street, Elyria, OH 44035 U.S.A.



333 Prospect Street - Elyria, OH 44035 U.S.A
(440) 323-4616 - (800) 321-5336 - Fax (440) 365-2612
