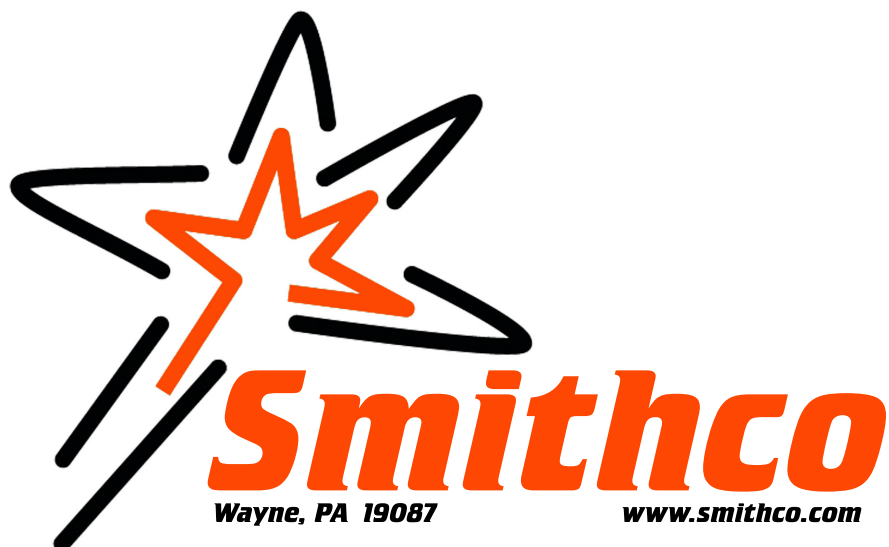


Parts & Service



**Super Star LE
2 Wheel Drive
42-400-A
SN: 400171**

July2010

Product Support:

**Hwy 55 & Poplar Ave; Cameron WI 54822
1-800-891-9435 productsupport@smithco.**

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Service

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Thank you for purchasing a Smithco product.

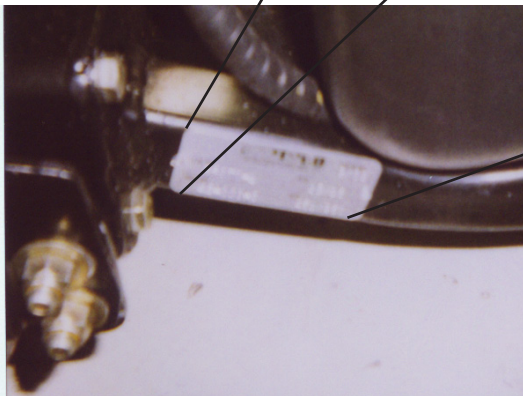
Read this manual and all other manuals pertaining to the Super Star LE carefully as they have safety, operating, assembly and maintenance instructions. Failure to do so could result in personal injury or equipment damage.

Keep manuals in a safe place after operator and maintenance personnel have read them. Right and left sides are from the operator's seat, facing forward.

All Smithco machines have a Serial Number and Model Number. Both numbers are needed when ordering parts. The serial number plate on the Super Star is located on the rear axle. Refer to engine manual for placement of engine serial number.

For easy access record your Serial and Model numbers here.

SMITHCO		DATE OF MFG.
WAYNE, PENNSYLVANIA 19087 USA 610-688-4009 Fax 610-688-6069		<input type="text"/>
SERIAL NO.	kW/hp	
<input type="text"/>	<input type="text"/>	
MODEL NO.	kg/lb	
<input type="text"/>	<input type="text"/>	



Information needed when ordering replacement parts:

1. Model Number of machine
2. Serial Number of machine
3. Name and Part Number of part
4. Quantity of parts



SAFE PRACTICES

1. It is your responsibility to read this manual and all publications associated with this machine (engine, accessories and attachments).
2. Never allow anyone to operate or service the machine or its attachments without proper training and instructions. Never allow minors to operate any equipment.
3. Learn the proper use of the machine, the location and purpose of all the controls and gauges before you operate the equipment. Working with unfamiliar equipment can lead to accidents.
4. Wear all the necessary protective clothing and personal safety devices to protect your head, eyes, ears,
5. Inspect the area where the equipment will be used. Beware of overhead obstructions and underground obstacles. Stay alert for hidden hazards.
6. Never operate equipment that is not in perfect working order or without decals, guards, shields, or other protective devices in place.
7. Never disconnect or bypass any switch.
8. Carbon monoxide in the exhaust fumes can be fatal when inhaled, never operate a machine without proper ventilation.
- 9.
10. Keep engine clean. Allow the engine to cool before storing and always remove the ignition key.
11. After engine has started, machine must not move. If movement is evident, the neutral mechanism is not adjusted correctly
13. cause serious injury.
14. This machine demands your attention. To prevent loss of control or tipping of the vehicle:
 - A. Use extra caution in backing up the vehicle. Ensure area is clear.
 - B. Do not stop or start suddenly on any slope.
 - C. Reduce speed on slopes and in sharp turns. Use caution when changing directions on slopes.
 - D. Stay alert for holes in the terrain and other hidden hazards.
15. Before leaving operator's position for any reason:
 - A. Disengage all drives.
 - B. Lower all attachments to the ground.
16. Keep hands, feet and clothing away from moving parts. Wait for all movement to stop before you clean, adjust or service the machine.
17. Keep the area of operation clear of all bystanders.
18. Never carry passengers.
19. Stop engine before making repairs/adjustments or checking/adding oil to the crankcase.
20. Use parts and materials supplied by SMITHCO only. Do not modify any function or part.

These machines are intended for professional maintenance on golf courses, sports turf, and any other area maintained turf and related trails, paths and lots. No guaranty as to the suitability for any task is expressed or implied.



WEIGHTS AND MEASURES

Length	64" (163 cm)
Width	57" (145 cm)
Height	47" (119 cm)
Wheel Base	41" (104 cm)
Weight	950 lbs. (451 kg)

SOUND LEVEL

At Ear Level	85 dB
At 3ft (.914 m)	83 dB
At 30 ft (9.14 m)	73 dB

ENGINE

Make	Briggs and Stratton Vanguard
Model#	305447
Type / Spec#	0230 G1
Horsepower	16 hp (11.9 kW)
Fuel	Unleaded 87 Octane Gasoline Minimum
Cooling System	Air Cooled
Lubrication System	Full Pressure
Alternator	16 amp

WHEELS & TIRE

Three: 22 X 11 - 10.0 Knobby Tires 8 psi (.55 bar)

equivalent.

Speed

Forward Speed	0 to 11 m.p.h. (0-18 kph)
Reverse Speed	0 to 5 m.p.h. (0-8 kph)

BATTERY

	Automotive Type 45-12 Volt
BCI Group	Size 45
Cold Cranking Amps	480
Ground Terminal Polarity	Negative (-)
Maximum Length	9" (23 cm)
Maximum Width	5.38" (14 cm)
Maximum Height	9" (23 cm)

FLUID CAPACITY

Crankcase Oil	See Engine Manual
Fuel	20 quarts (18.93 liters)
Hydraulic Fluid	20 quarts (18.93 liters)
Grade of Hydraulic Fluid	SAE 10W-40 API Service SJ or higher Motor Oil



MAINTENANCE



CAUTION Before servicing or making adjustments to machine, stop engine and remove key from ignition.

NOTE: Use all procedures and parts prescribed by the manufacturer's. Read the engine manual.

LUBRICATION

Use No. 2 General purpose Lithium Base Grease and lubricate every 100 hours. The Super Star has three one is located on the steering chain tensioner. Access to the steering chain tensioner is available through the plugs located on the right side of the nosecone.

2WD Super Stars have a spring loaded wheel bearing protector on the front wheels. Check front wheel grease at the beginning of every season. To check lubrication level, try rocking or pushing on the edge of the piston. If the piston moves, no grease is needed. If piston does not move, add grease until piston moves outward about 1/8 inch.

AIR CLEANER ON ENGINE

1. Unhook clips on both sides of cover and remove cover.
2. Carefully slide pre-cleaner of cartridge. To service pre-cleaner, wash in liquid detergent and water. Squeeze dry in clean cloth. Saturate in engine oil. Squeeze in clean absorbent cloth to remove excess oil. Replace if very dirty or damaged.
3. Remove knob and plate. Carefully remove cartridge to prevent debris from entering carburetor. To damaged.

NOTE: Do not use petroleum solvents, e.g., kerosene, which will cause cartridge to deteriorate. Do not use pressurized air to clean cartridge. Pressurized air can damage cartridge.

4. Reinstall cartridge, plate and knob.
5. Reassemble pre-cleaner on cartridge.
6. Replace cover and reattach clips to body.

REMOTE AIR CLEANER

1. Unclip the two clips, remove the cover and pull out the element.
2. T
3. Clean out the inside of the body and cover.
4. Place the element into the body and put the cover back on.

TOWING

When it is necessary to move the Super Star without engine running, bypass valve built into hydrostatic pump must be "open" by turning it counterclockwise. The valve is located on the right side of the pump. An . When normal, driven, operation is desired, valve should be "closed" by turning it clockwise. Failure to "close" the valve with engine running means no power to wheels. **do not** recommend this as a standard procedure. When towing **do not** tow the machine faster than 2-3 MPH (3-5 km/h) because the drive system may be damaged. The tires may lock up if the machine is towed too fast. If this occurs, stop towing the machine. If the machine must be moved a considerable distance, transport it on a truck or trailer.



TIRE PRESSURE

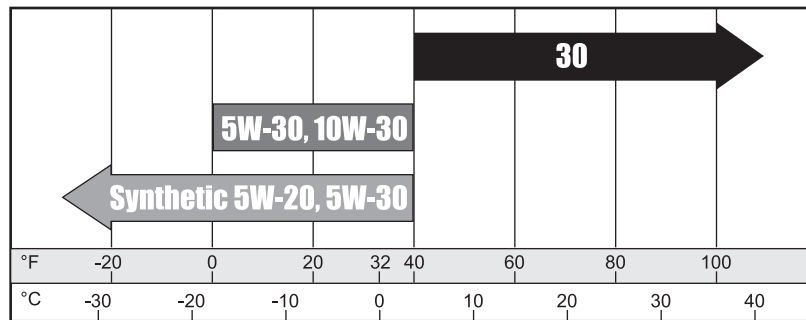
explode. T

ENGINE

Change and add oil according to chart below

Service SJ or higher" SAE 30 oil. Use no special additives with recommended oils. Do not mix oil with gasoline.

SAE VISCOSITY GRADES



Starting Temperature Range Anticipated Before Next Oil Change

Air cooled engine run hotter than automotive engines. Use of multi-viscosity oils (10W-30, etc.) above 40° F (4° C) will result in high oil consumption and possible engine damage. Check oil level more frequently if using these types of oils.

SAE 30 oil, if used below 40° F (4° C), will result in hard starting and possible engine bore damage due to inadequate lubrication.

HYDRAULIC OIL

1. Use SAE 10W-40 API Service SJ or higher motor oil.
2. For proper warranty, change oil every 500 hours or annually
3. The oil level should be 2" to 2 1/2"
4. , run the machine for a few minutes. Check oil level and for leaks.
5. Check and service more frequently when operating in extremely cold, hot or dusty conditions.
- 6.
7. , water contamination may be a problem.
8. cause. T
9. In extreme temperatures you can use straight weight oil. We recommend SAE 30W API Service SJ or higher when hot (above 90°F (33°C)) and SAE 10W API Service SJ or higher when cold (below 32°F (0°C) ambient temperature. Use either motor oil or hydraulic oil, but do not mix.
10. Oil being added to the system must be the same as what is already in the tank. which type you put in.

MAINTENANCE

WHEEL MOUNTING PROCEDURE

1. T
2. Block one of the other wheels.
3. Loosen nuts slightly on wheel to be removed.
4. Jack up machine being careful not to damage underside of machine.
5. Remove nuts. Remove wheel.
5. Place new wheel on hub lining up bolt holes.
6. T
200 hours thereafter.
7. Lower machine to ground and remove blocks and jack.

BATTERY

Batteries normally produce explosive gases which can cause personal injury any ignited object to come near the battery. When charging or working near battery, always shield your eyes and always provide proper ventilation.

Battery cable should be disconnected before using "Fast Charge".

Charge battery at 15 amps for 10 minutes or 7 amps for 30 minutes. Do not exceed the recommended charging rate. If electrolyte starts boiling over, decrease charging.

Avoid hazards by:

1. Filling batteries in well-ventilated areas.
2. Wear eye protection and rubber gloves.
3. Avoid breathing fumes when electrolyte is added.
4. Avoid spilling or dripping electrolyte.



WARNING

Battery Electrolyte is an acidic solution and should be handled with care. If electrolyte is splashed on any part of your body, flush all contact areas immediately with liberal amounts of water. Get medical attention immediately.

JUMP STARTING



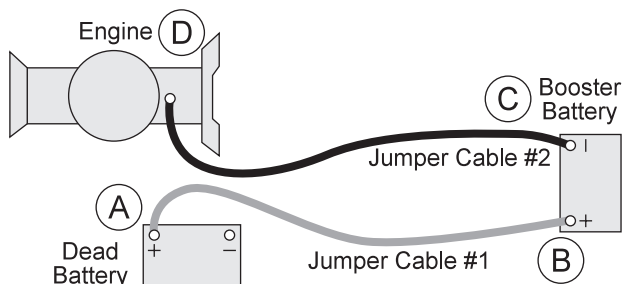
WARNING

Use of booster battery and jumper cables. Particular care should be used when connecting a booster battery. Use proper polarity in order to prevent sparks.

To jump start (negative grounded battery):

1. Shield eyes.
2. Connect ends of one cable to positive (+) terminals of each battery
3. Connect one end of other cable to negative (-) terminal of "good" battery (C).
4. Connect other end of cable (D) to engine block on unit being started (NOT to negative (-) terminal of battery)

To prevent damage to other electrical components on unit being started, make certain that engine is at idle speed before disconnecting jumper cables.



SERVICE CHART



CAUTION Before servicing or making adjustments to the machine, stop engine, set park break, block wheels and remove key from ignition.



NOTE: Follow all procedures and **ONLY** use parts prescribed by the manufacturer. Read the engine manual before maintenance.

but as a supplement. You must adhere to the guidelines established by the manufacturer for warranty coverage. In adverse conditions such as dirt, mud or extreme temperatures, maintenance should be more frequent.

Maintenance Service Interval	Maintenance Procedure
After the first 8 operating hours	Torque the wheel lug nuts. (54-74 Nm) (37-100 Nm)
	Change the engine oil filter.
	Change the hydraulic filter.
After the first 20 operating hours	Change oil filter after first 20 and first 100 hours.
	Check the engine oil.
Before each use daily	Check the hydraulic fluid level.
	Check the tire pressure.
	Check condition of hydraulic hoses and fittings.
	Inspect and clean the machine.
	Inspect cooling system.
	Check the battery fluid level and cable connections.
Every 25 hours	Change oil when operating under heavy load or high
Every 50 hours	Change the engine oil and filter.
Every 100 hours	Check engine for leaks or loose parts.
	Check air cleaner.
	Check tire pressure (5 psi (0.35 bar)).
	Torque the wheel lug nuts. (54-74 Nm) (37-100 Nm)
	Grease Machine.
Check belt tension (where needed)	
Every 250 hours	Change oil filter
	Change hydraulic filter
	Clean battery terminals
Every 400 hours	Check spark plugs
Every 500 hours or yearly	Lubricate machine
	Visual inspection of machine and hydraulic hoses
	Change oil.
	Torque lug nuts.
	Check battery terminals and electrolyte level.
	Change all filters.



END USER'S SERVICE CHART

Duplicate this page as needed.

Service

Maintenance Check Item	For the week of						
	Mon	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
Check the Safety Seal Switch							
Check Starting Operation							
Check the fuel level							
Check the engine oil level.							
Check the condition of the air filter							
Clean the engine cooling fins.							
Check for unusual engine noises							
Check the hydraulic oil level							
Check hydraulic hoses and fittings for damage							
Check for fuel leaks.							
Check the tire pressure (9 psi)							
Check the instrumentation							
Inspect electrical system for loose wires							
Check park brake adjustment							
Change oil filter.							
Change oil.							
Ensure all warning devices are intact.							
Areas of Concern							
Inspection Performed by:							
Name	Date		Information				

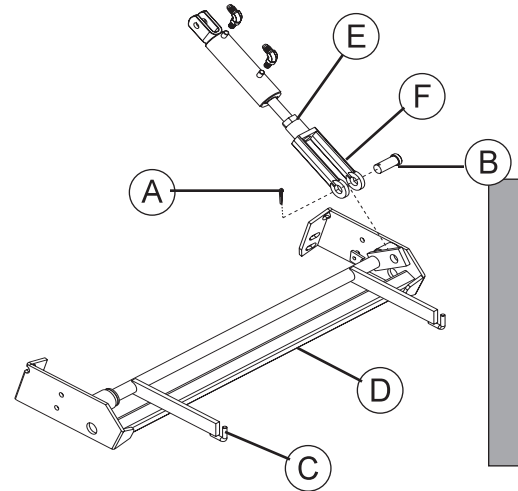


RAKE LIFT CYLINDER

Completely lower Rake Lift. Remove cotter pin (A) and clevis pin (B). Place attachment lift arms (C) at $\frac{1}{16}$ " above cross member (D) on Rake Lift. Loosen jam nut (E). Twist cylinder extension (F) so clevis pin end of cylinder extension lines up with holes in attachment lift arm. Replace clevis and cotter pins. Tighten jam nut. Raise and lower Rake Lift to check for proper clearance.

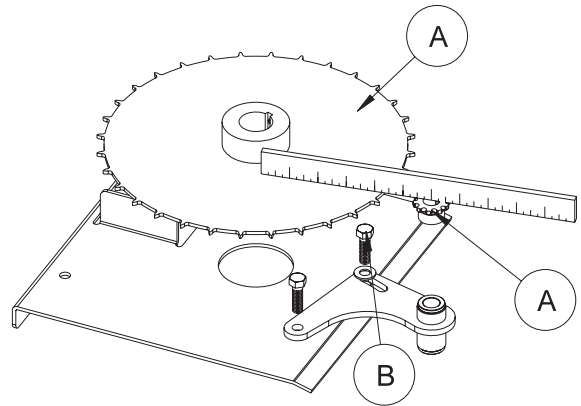


When the rear rake attachment is lowered while the machine is in forward motion, the forward speed of the machine will slow drastically. Operator should be prepared for a rapid change in speed.



STEERING CHAIN ADJUSTMENT

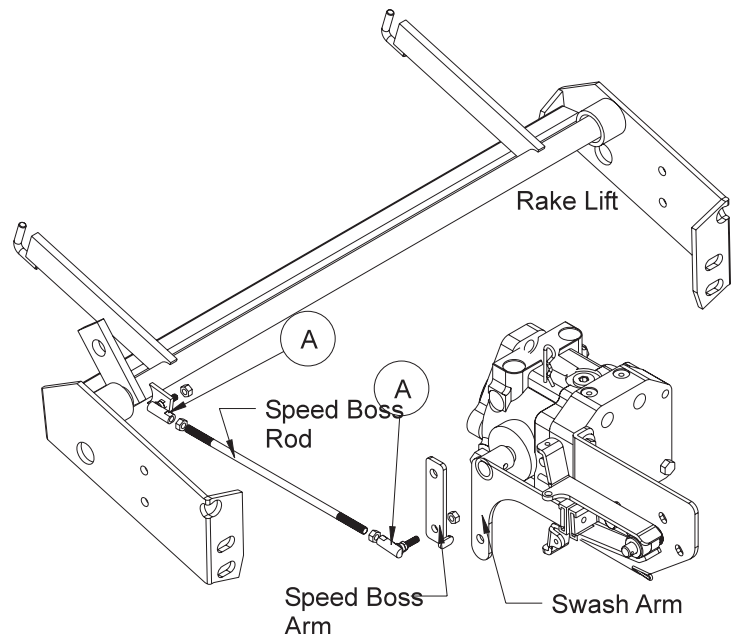
You will have to remove the nose cone assembly to get at steering sprockets. Steering Sprockets (A) should be level with each other. Check with straight edge. Make any adjustments. Adjust the chain tensioner bolt (B) so that the chain is snug. Tighten all nuts and bolts in place.



SPEED BOSS

Speed Boss allows the machine to operate at a proper speed while raking sand traps on golf courses. This speed boss has been factory set at an average speed of 3-4 m.p.h. (5-6.5 kph). The Speed Boss will only limit the speed while the rake is lowered into the operating position. The speed setting may be adjusted by turning the Ball Joint (A) counterclockwise to make the machine operate slower or turn clockwise to go faster. Tighten jam nut. Check to make sure nothing is binding and test drive to check desired speed.

For RBS System, Spiker and Grader Box remove the speed boss arm and the speed boss rod from machine so it does not interfere with other operations.

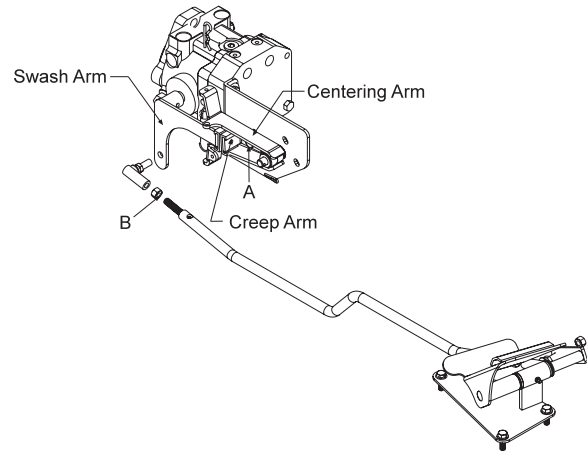


ADJUSTMENTS (CONTINUED)

WHEEL 'CREEP' ADJUSTMENT

'Creep' is when engine is running and hydrostatic transmission is in neutral, but due to inadequate alignment, wheels still move. Do the following procedures to stop this motion.

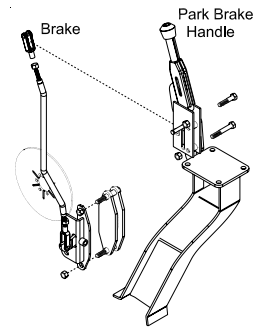
1. Lift ground and can turn freely.
2. On the side of the pump there is a creep arm inside a centering arm. Loosen bolt (A).
3. With engine running adjust the creep arm up or down in slot so centering arm centers on the swash arm.
4. Tighten all fasteners and test by using foot pedal linkage to see that the "creep" is removed.
5. T



PARK BRAKE

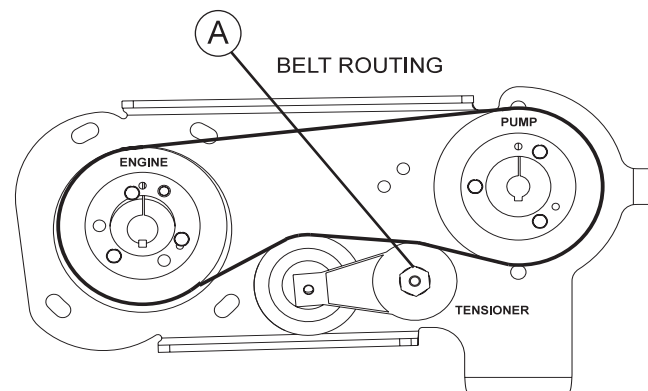
The park brake is located on the right hand side of the machine and operates a brake on the right rear wheel. Push lever forward to engage and pull back to disengage.

To adjust turn the knob on the end of the handle. For further adjustment you may turn the yokes (A) clockwise to tighten and counter clockwise to loosen.



ADJUSTMENT OF BELT TENSIONER

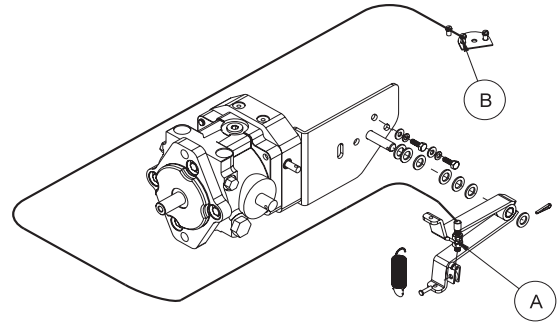
The belt tensioner controls the tension on the belt from the engine to the pump. The proper tension of the idler should be in the second notch on the side of the tensioner. Over tightening the belt will shorten the life of the belt and the machine may not perform to the best of its ability. To adjust belt tensioner, loosen the bolt holding the tensioner (A). Bring idler pulley tight to the belt and turn tensioner into belt to the second notch. Tighten bolt on tensioner.



ADJUSTMENTS (CONTINUED)

TO ADJUST FOOT PEDAL THROTTLE CABLE

- 1.
2. Start the engine, make certain that the hand throttle is in the idle position (1200 engine RPM).
3. Engine speed must increase as soon as the foot pedal begins to move in either direction. At the full forward position, the engine RPM must be 3600 RPM \pm 100.
4. Minor adjustment can be made by backing out (unscrewing) (Ref A) until you reach full engine RPM with the foot pedal fully depressed in the forward position. Be sure to recheck after the nuts are fully tightened.
5. Major adjustment needs to be made at (Ref B) by pulling the slack out of the cable. Loosen the screw in the wire block that is clamped onto the end of the cable and sliding it up to the cable block that is through the throttle plate. Do not let the throttle plate move to increase idle speed. Tighten the screw.
6. Test run to determine that there is no binding and that engine idle speed is 1200 RPM and that it is 3600 RPM at full forward position of the foot pedal.



Service

STORAGE

When storing, remove the key from the key switch to avoid unauthorized persons from operating machine.

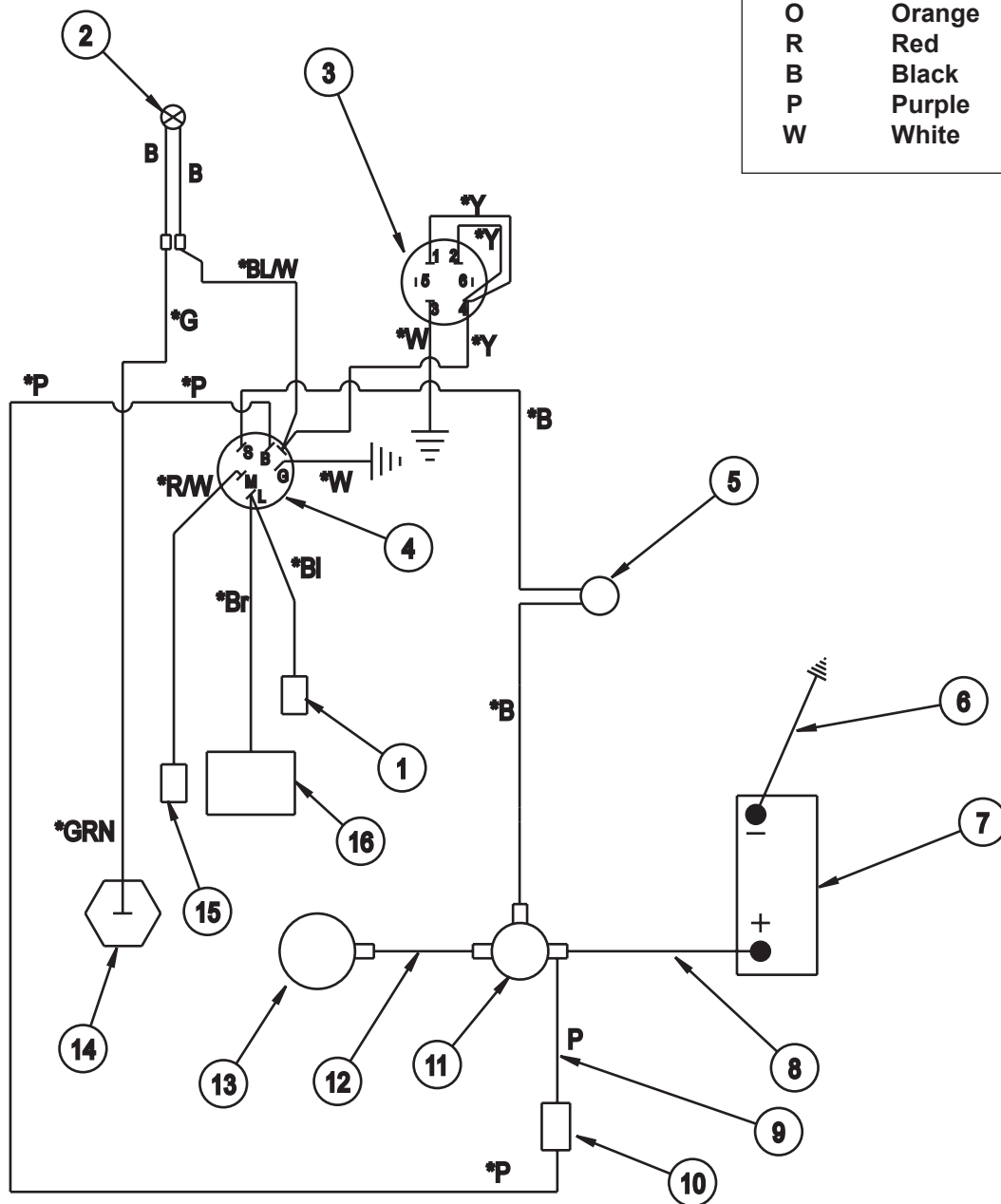
1. Before storing clean machine thoroughly.
2. Check bolts and nuts, tighten as necessary.
3. Make all repairs that are needed and remove any debris.
4. Remove the battery, adjust the electrolyte level and recharge it. Store the battery in a dry, dark place.
5. Store in a clean and dry area, but NOT near a stove, furnace or water heater which uses a pilot light or any device that can create a spark.
6. Engines stored over 30 days need to be protected or drained of fuel to prevent gum from forming in a fuel system or on essential carburetor parts. Check the engine manual and follow the instructions for the storage of the engine.

WIRING DRAWING

Color Code Chart

Bl	Blue
Br	Brown
Y	Yellow
Grn	Green
O	Orange
R	Red
B	Black
P	Purple
W	White

Diagrams

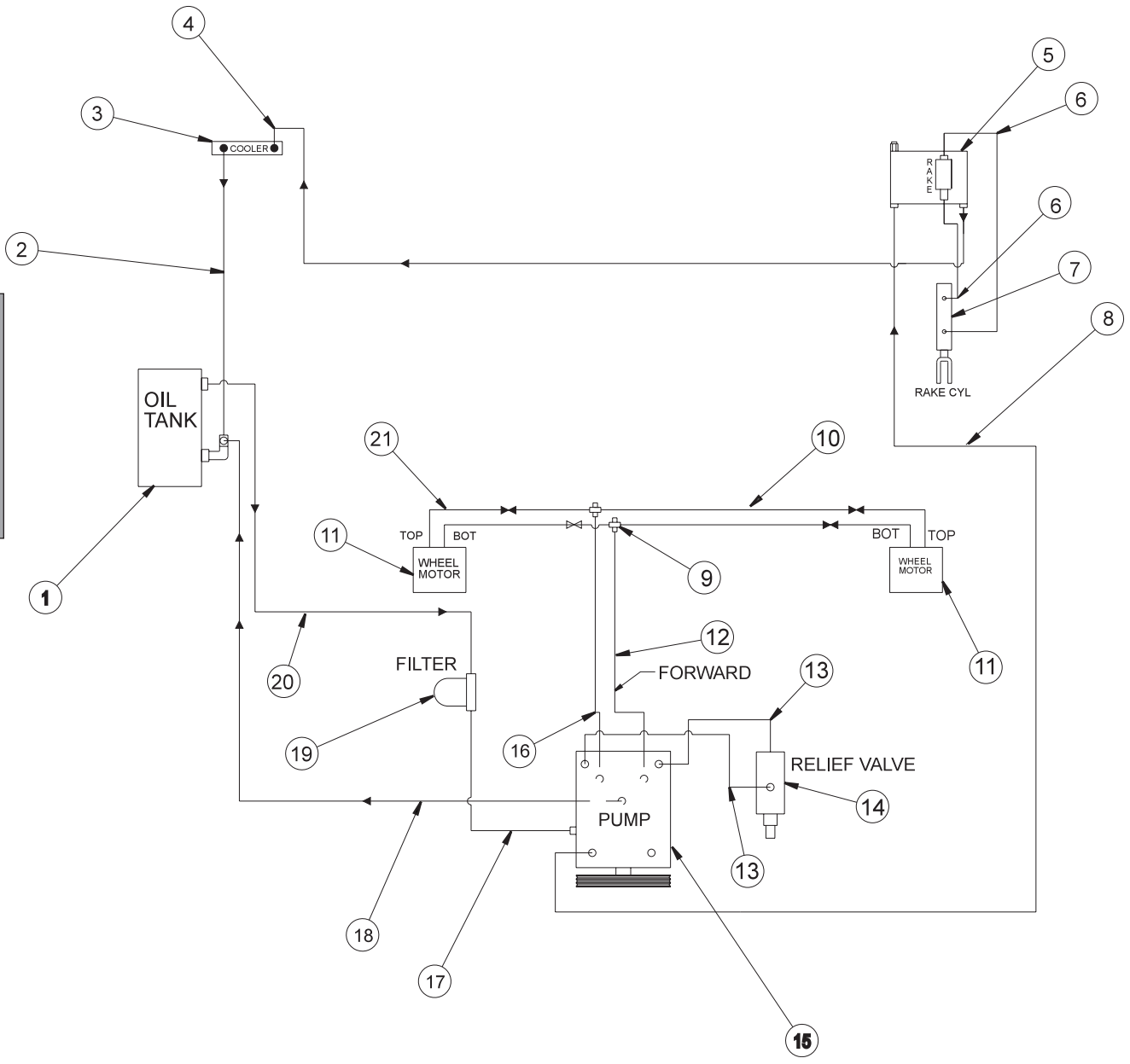


WIRING PARTS LIST

REF #	PART #	DESCRIPTION	QUANTITY
1		After Fire Solenoid (on engine)	1
2	50-359	Oil Pressure Warning Light	1
3	12-017	Hour Meter	1
4	13-488	Ignition Switch (B & S# 496603)	1
	76-310	Key Set (comes with 13-488)	1
5	14-292	Seat Switch	1
6	76-327	Ground Battery Cable	1
7		Battery (not included)	
8	75-518	Battery Cable	1
9	42-252	Wire, Circuit Breaker to Solenoid	1
10	8975	30 Amp Circuit Breaker	1
	8977	Circuit Breaker Boot	1
11	13-492	Solenoid (B & S# 807829)	1
12	22-017	Cable Black	1
13		Starter (on engine)	1
14	13-491	Oil Sender (on engine B & S# 491657)	1
15		Stop Switch Terminal (on engine)	1
16		(on engine)	1
	42-763	Wire Harness (includes all wire colors with *)	1

HYDRAULIC DRAWING

Diagrams



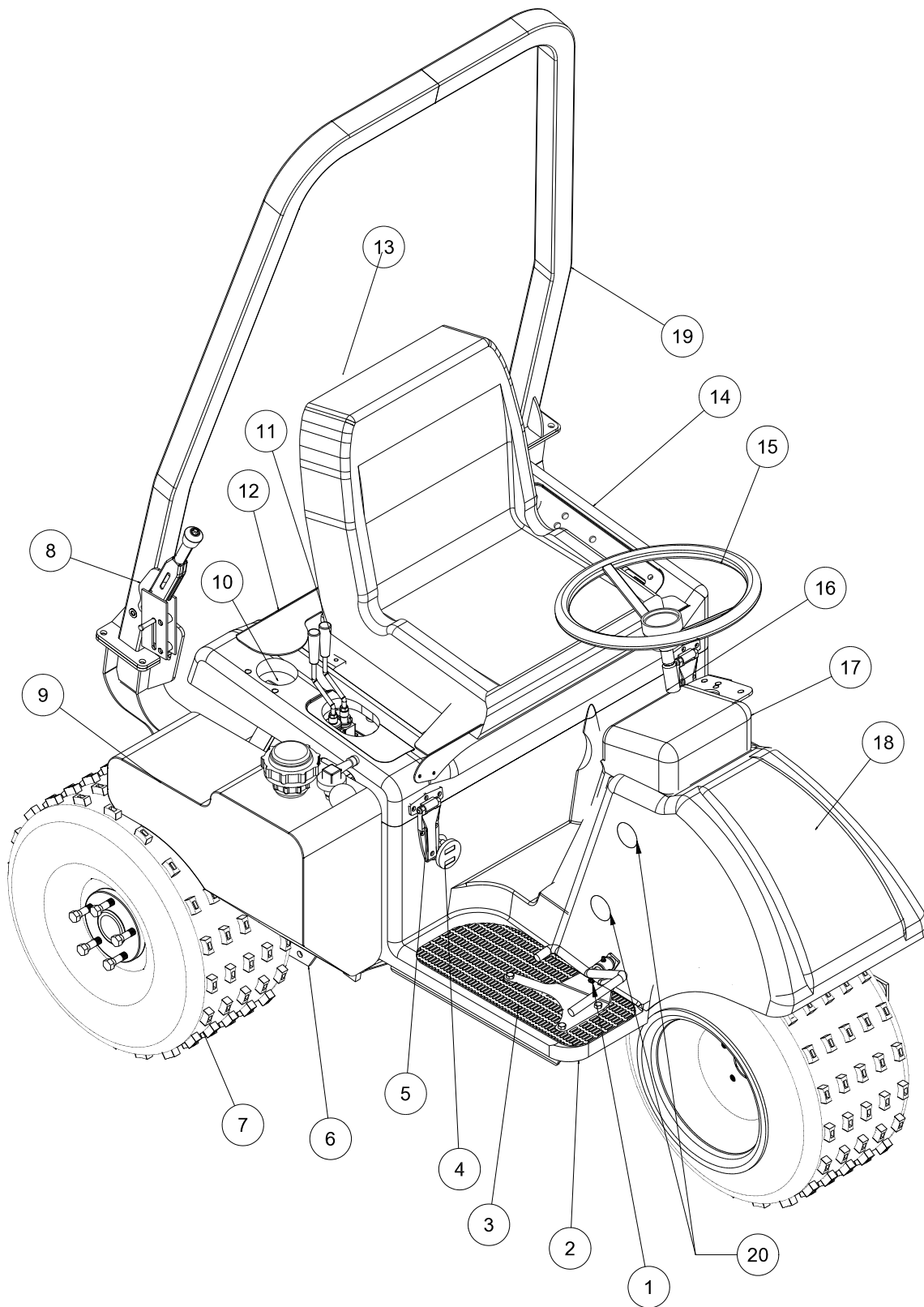
HYDRAULIC PARTS LIST

REF #	PART #	DESCRIPTION	QUANTITY
1	42-005	Oil Tank	1
	13-747	Filler Breather	1
2	42-366	Hydraulic Hose	1
3	42-265	Aluminum Oil Cooler	1
4	42-363	Hydraulic Hose	1
5	13-731	Single Bank Valve	1
	78-418	Valve HAndle	1
6	42-365	Hydraulic Hose	1
7	43-150	Hydraulic Cylinder	1
	42-040	Yoke End	1
	HNJ-34-16	Jam Nut ³ / ₄ - 16	1
8	42-046	Hydraulic Hose	1
9	18-342	Cross	2
	18-344	Caps	2
10	42-261	Hydraulic Tube	2
11	42-002	Rear Wheel Motor	2
12	42-369	Hydraulic Hose 10 ³ / ₄ "	1
13	42-370	Hydraulic Hose	2
14	42-192	Relief Valve	2
15	34-109	Variable Pump	1
16	42-368	Hydraulic Hose 9"	1
17	8832-45	Suction Hose	1
	18-222	Hose Clamp	2
18	42-367	Hydraulic Hose	1
19	23-006	Oil Filter	1
	23-031	Replacement Filter Only	
20	8832-24	Suction Hose	1
	18-222	Hose Clamp	2
21	42-304	Hydraulic Tube	2

HYDRAULIC PRESSURES

Pump Displacement	.913 in ³ /rev	Charge Pump Displacement	.33 in ³ /rev
Pump Input Speed (up to)	3600 rpm	Max. Inlet Vacuum	5 in. Hg
Max. Operating Pressure	3500 psi, 2500 peak psi	Max. Case Pressure	25 psi
Implement Setting	700-1000 psi	Relief Valve Pressure (set at)	2500 psi
13-729 Hydraulic Valve (2 bank)	900 psi		

MAIN FRAME DRAWING

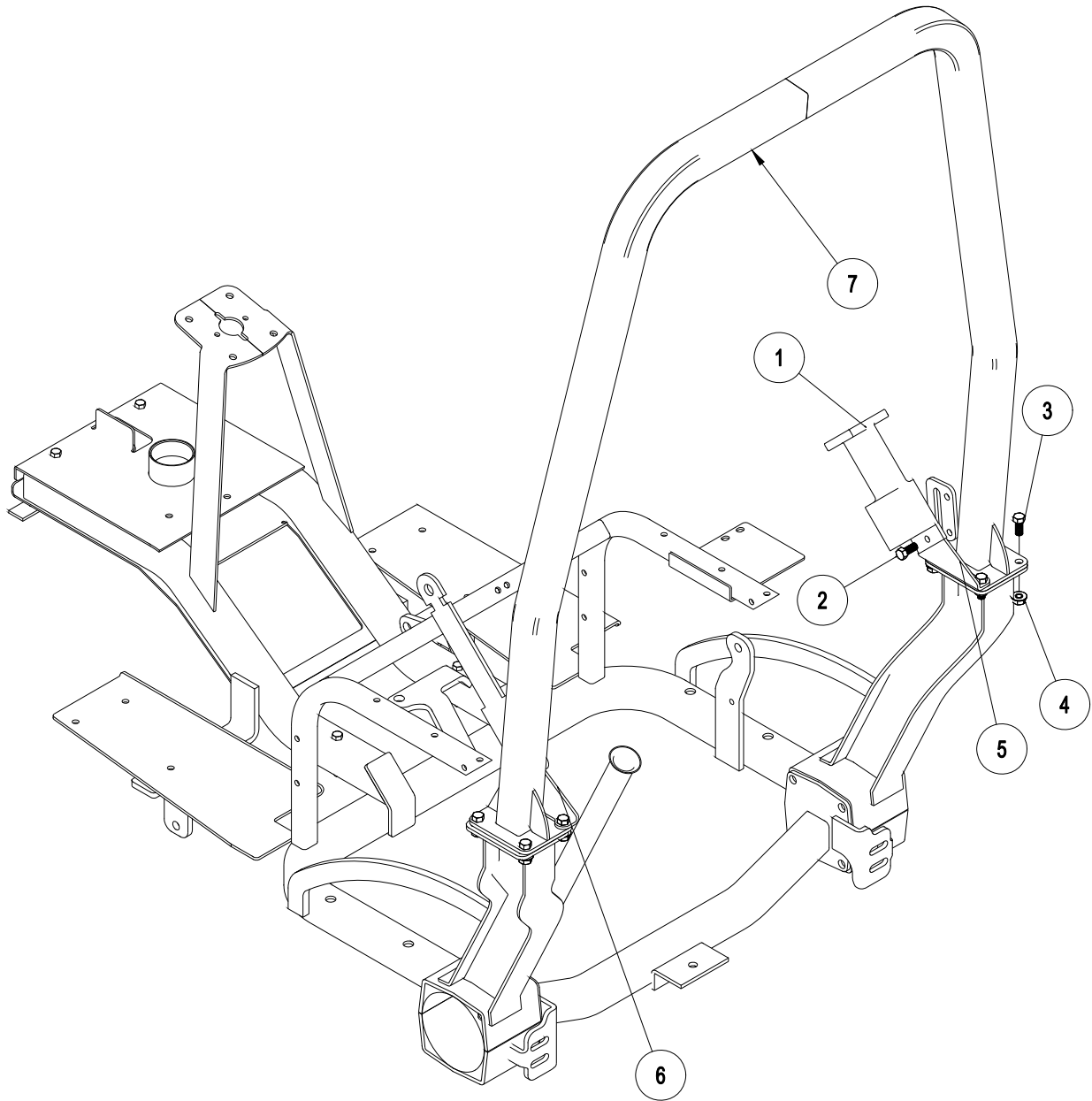


Parts

MAIN PARTS COMMON LIST

REF#	PART#	DESCRIPTION	QUANTITY
1	42-813	Foot Pedal	1
2	42-780	Floor Panel	1
3	42-767	Right Floor Mat	1
	42-768	Left Floor Mat	1
4	12-017	Volt/Hour Meter	1
5	27-055	Hinge	2
6	42-425	Main Frame	1
7	42-161	Tire and Wheel	3
	42-161-01	Tire 22 x 11 x 10	3
	42-161-02	Wheel	3
	60-268	Lug Bolt	10
8	60-106	Park Brake Lever	1
9	42-814	Gas Tank	1
10	42-786	Plastic Cup Holder	1
11	78-418	Valve Handle	1
12	42-375	Seat Panel	1
	8803-17	Trim w/ Black Lace	1
13	14-269	Adjustable Low Back Seat	1
14	42-779	Seat Panel	1
15	20.057	Steering Wheel	1
16	42-760	Top Steering Shaft	1
17	42-422	Tower Console	1
18	42-781	Nose Cone	1
	HST-14-20-100	Truss Head Screw $\frac{1}{4}$ - 20 x 1	6
	78-274	Cage Nuts	2
	HNTL-14-20	Lock Nut $\frac{1}{4}$ - 20	4
19	42-801	ROPs (optional)	1
20	18-436	Plastic Plug Cap	2

ROPS DRAWING (OPTIONAL)

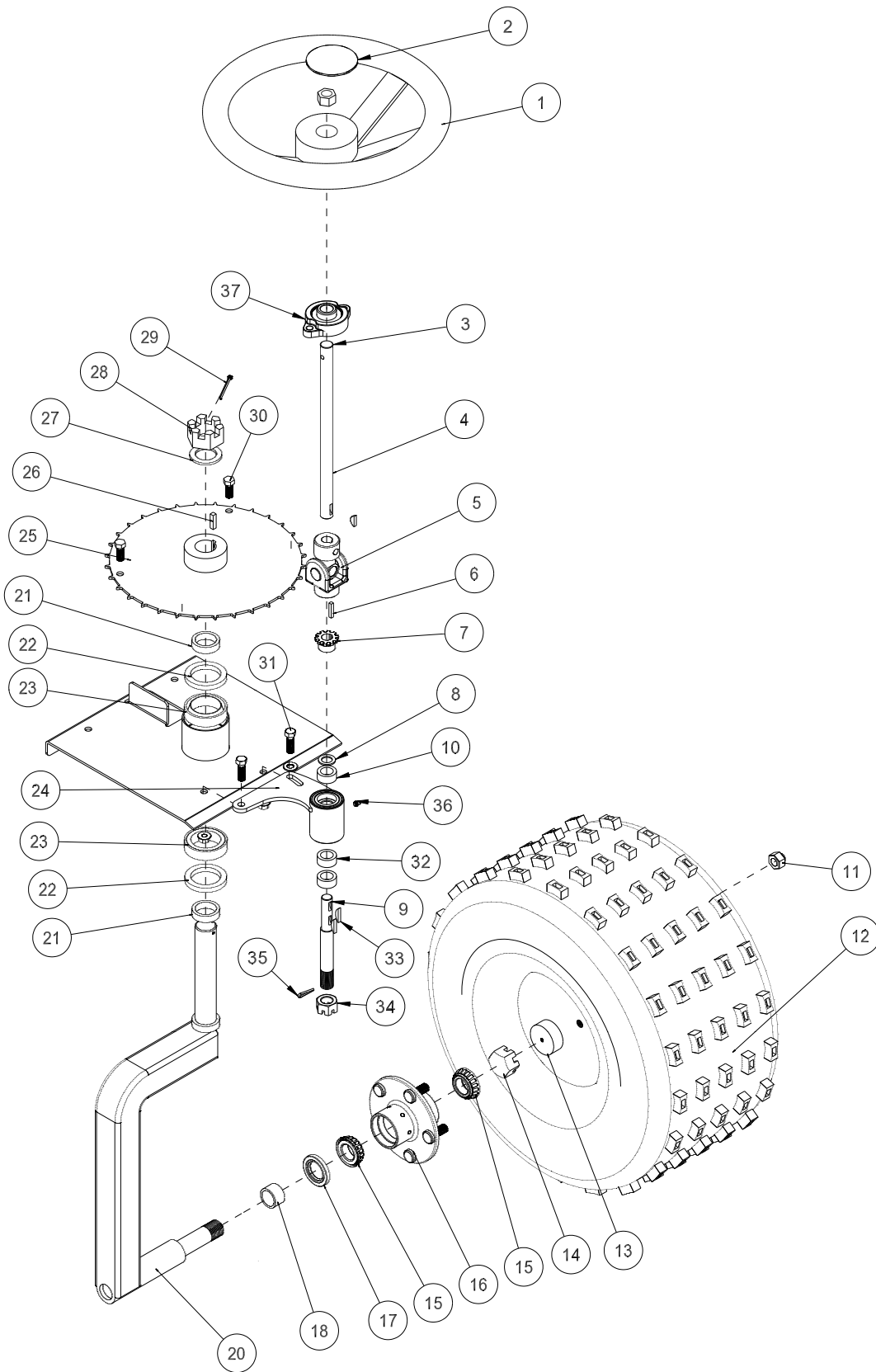


Parts

ROPS PART LIST (OPTIONAL)

REF#	PART#	DESCRIPTION	QUANTITY
1	76-198-03	Seat belt	1
2	HB-716-14-100	Bolt $\frac{7}{16}$ - 14 x 1	2
3	HB-716-14-125	Bolt $\frac{7}{16}$ - 14 x $1\frac{1}{4}$	8
4	HNTL-716-14	Lock Nut $\frac{7}{16}$ - 14	10
5	42-802	Right Seat belt Bracket	1
6	42-803	Left Seat Belt Bracket	1
7	42-801	ROPS Bar	1

2 WHEEL DRIVE FRONT FORK DRAWING

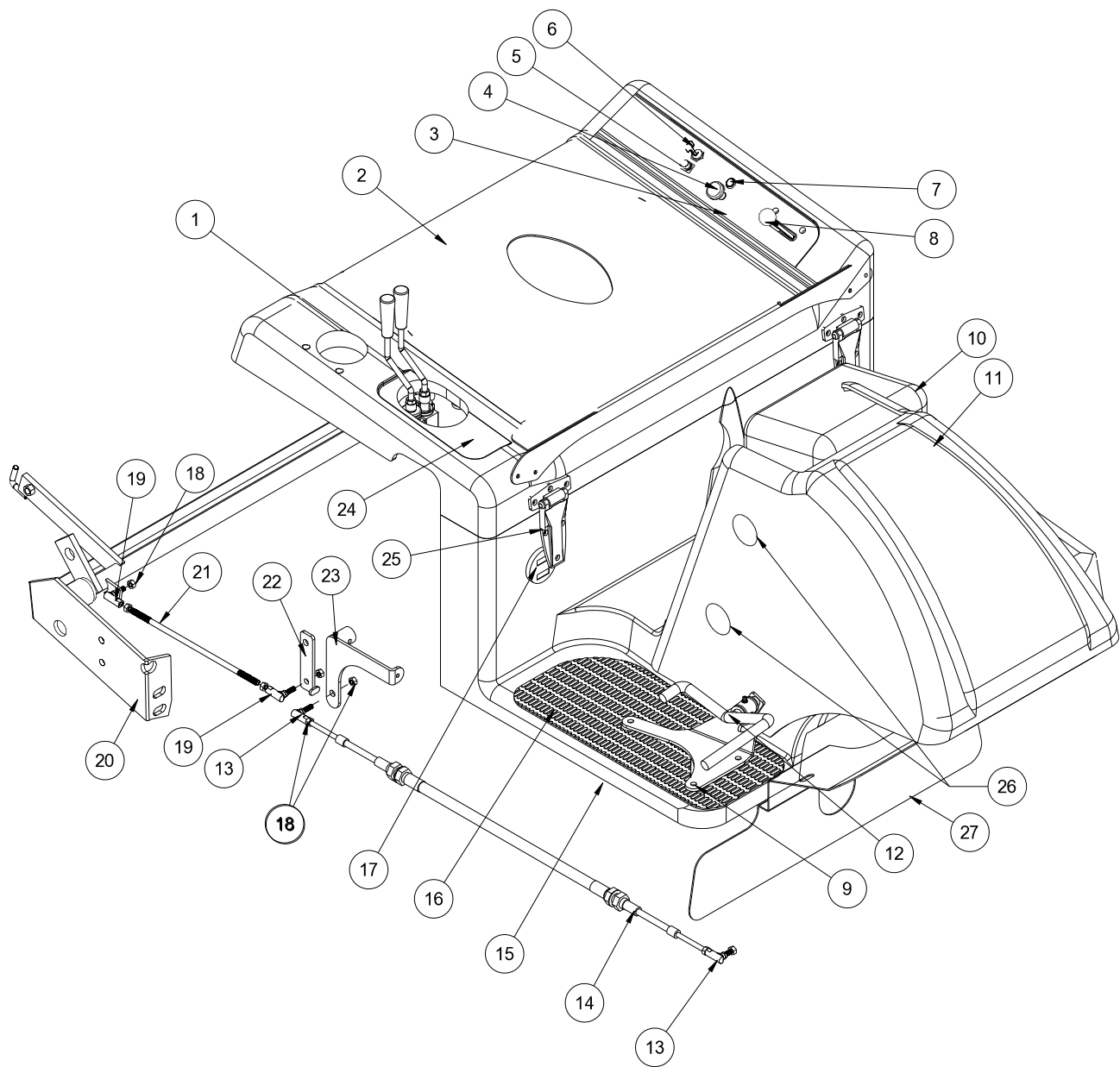


Parts

2 WHEEL DRIVE FRONT FORK PARTS LIST

REF#	PART#	DESCRIPTION	QUANTITY
1	20-057	Steering Wheel	1
2	20-129	Center Cap	1
	27-077	Decal, Smithco Round	1
	HNJ-58-18	Jam Nut $\frac{5}{8}$ - 18	1
	HWK-316-075	W $\frac{3}{16}$ x $\frac{3}{4}$	1
3	HRP-14-150	Roll Pin $\frac{1}{4}$ x $1\frac{1}{2}$	1
4	42-376	Top Steering Shaft	1
	HWK-316-075	W $\frac{3}{16}$ x $\frac{3}{4}$	1
5	60-300	U-Joint	1
6	HKSQ-316-100	Machine Key $\frac{3}{16}$ x $\frac{3}{16}$ x 1	2
7	60-298	Sprocket	1
8	HMB-58-14	Machine Bushing $\frac{5}{8}$ x 14 GA	1
9	13-005	Bottom Steering Shaft	1
10	60-325	Spacer	2
11	60-268	Lug Nut	5
12	42-161	Tire and Wheel	1
	42-161-01	Tire 22 x 11 x 10	1
	42-161-02	Wheel	1
	8839	Windshield Washer Fluid or Equivalent	43.5 pints
13	42-817	Wheel Bearing Protector	1
14	HNA-100-14	Jam Nut 1 - 14	1
	HP-18-150	Cotter Pin $\frac{1}{8}$ x $1\frac{1}{2}$	1
15	11-043	Bearing	2
16	80-019	Hub (includes bearings, seal, dust cap, lug nuts, and studs)	1
	27-022-02	Stud $\frac{1}{2}$ - 20	5
17	11-041	Seal	1
18	11-042	Spacer	1
20	13-448	Front Fork	1
21	20-141	Spacer	2
22	20-142	Oil Seal	2
23	20-143	Bearing	2
24	13-744	Chain Tensioner	1
	11-038	Bearing with Race	2
	11-039	Oil Seat	2
25	42-295	Steering Sprocket	1
	8834-37.5	Roller Chain	1
	18-114	Master Link	1
26	HKSQ-14-100	Square Key $\frac{1}{4}$ x $\frac{1}{4}$ x 1	1
27	HMB-114-10	Machine Bushing $1\frac{1}{4}$ x 10GA	1
28	HNA-114-12	Axle Nut $1\frac{1}{4}$ - 12	1
29	HP-18-200	Cotter Pin $\frac{1}{8}$ x 2	1
30	HB-38-16-100	Bolt $\frac{3}{8}$ - 16 x 1	2
	HNFL-38-16	Flange Whiz Lock Nut $\frac{3}{8}$ - 16	2
31	HB-38-16-125	Bolt $\frac{3}{8}$ - 16 x $1\frac{1}{4}$	2
	HW-38	Washer $\frac{3}{8}$	1
	HNFL-38-16	Flange Whiz Lock Nut $\frac{3}{8}$ - 16	2
32	11-040	Spacer	3
33	HWK-316-063	W $\frac{3}{16}$ x $\frac{5}{8}$	2
34	HNAT-34-16	Thick Slotted Nut, $\frac{3}{4}$ - 16	1
35	HP-18-150	Cotter Pin, $\frac{1}{8}$ x $1\frac{1}{2}$	1
36	HG-14-28-180	Grease Fitting	1
37	40-009	Flange Block	1

LINKAGE DRAWING



PARTS

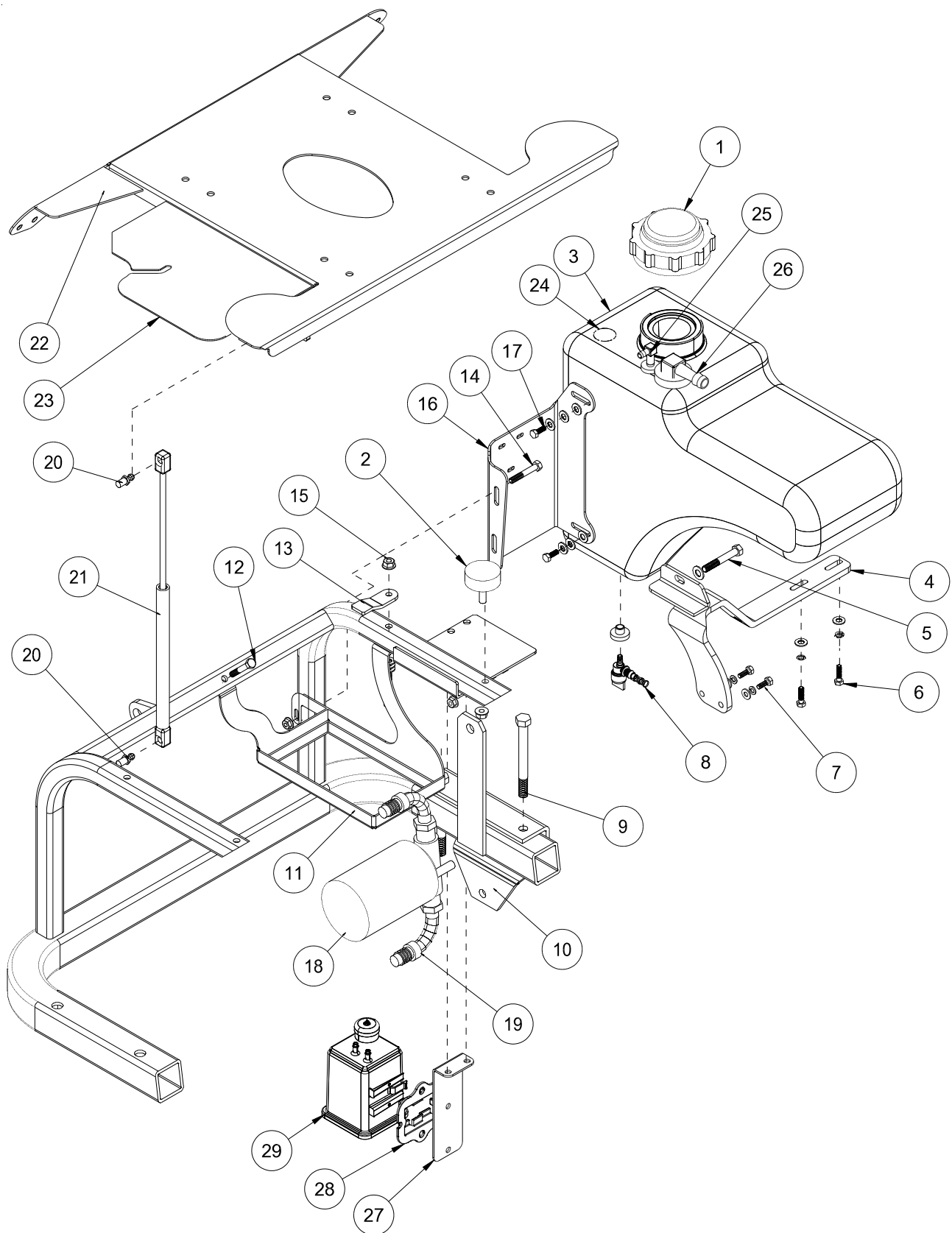
LINKAGE PARTS LIST

REF#	PART#	DESCRIPTION	QUANTITY
1	42-786	Plastic Cup Holder	1
2	42-375	Seat Panel	
3	42-593	Decal, Control Panel	1
4	42-783	Choke	1
5*		Toggle Switch for Optional Accessories	1
6	13-488	Key Switch (B&S 496603)	1
	76-310	Key Set	1
7	50-359	Warning Light	1
8	21-463	Throttle Cable	1
	HSTP-14 -20-075	Phillips Truss Head Screw $1/4 - 20 \times 3/4$	2
	HNFL-14-20	Flange Whiz Lock Nut $1/4 - 20$	2
9	42-313	Pedal Stop	1
	HNFL-516-18	Flange Whiz Lock Nut $5/16 - 18$	2
10	42-422		1
11	42-471		1
12	42-813	Foot Pedal	1
	HG-14-28-180	Grease Fitting $1/4 - 28 \times 180^\circ$ (comes with)	1
	76-299	Pedal Pad	1
	42-791	Short Pedal Pad	1
	HB-516-18-125	Bolt $5/16 - 18 \times 1 1/4$	2
	HW-516	Washer $5/16$	2
	HNFL-516-18	Flange Whiz Lock Nut $5/16 - 18$	2
13	8-701	Ball Joint $1/4 - 28$	2
14	27-132	Cable	1
15	42-780		1
16	42-767	Right Floor Mat	1
	42-768	Left Floor Mat	1
17	12-017	Hour Meter	1
18	HN-14-28	Nut $1/4 - 28$	4
	HWL-14	Lockwasher $1/4$	2
19	21-462	Ball Joint $5/16 - 24$	2
21	42-267	Speed Boss Rod	1
22	42-249	Speed Boss Arm	1
23	42-308	Swash Arm	1
24	42-765	Decal, Lift Controls	1
25	27-055	Hinge	2
	HSMFCS-10-32-100	Machine Screw #10 - 32 x 1	12
	HNFL-10-32	Flange Whiz Lock Nut #10 - 32	12
26	18-436	Plastic Plugs	2

*

valve and Light Kit

GAS TANK DRAWING

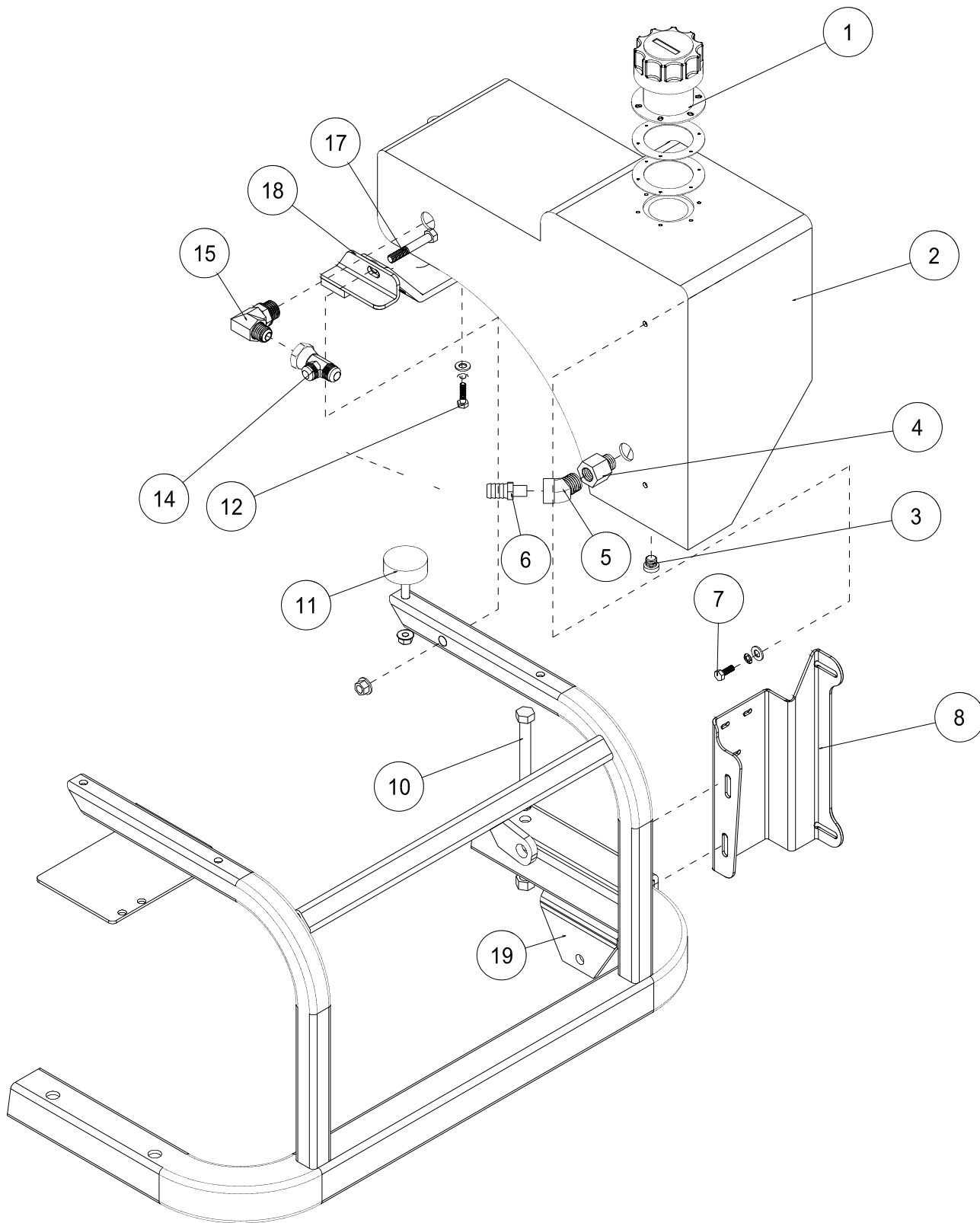


Parts

GAS TANK PARTS LIST

REF#	PART#	DESCRIPTION	QUANTITY
1*	42-814-02	Cap	1
*	42-814-01	Tether	1
2	50-081	Rubber Bumper	1
	HNFL-38-16	Flange Whiz Lock Nut $\frac{3}{8}$ - 16	1
3*	42-814	Gas Tank (includes all * items)	1
4	42-770	Right Tank Support	1
5	HB-38-16-200	Bolt $\frac{3}{8}$ - 16 x 2	1
	HW-38	Washer $\frac{3}{8}$	2
	HNFL-38-16	Flange Whiz Lock Nut $\frac{3}{8}$ - 16	1
6	HB-14-20-100	Bolt $\frac{1}{4}$ - 20 x 1	2
	HW-14	Washer $\frac{1}{4}$	2
	HW-516	Washer $\frac{5}{16}$	2
	HWL-14	Lock Washer $\frac{1}{4}$	2
7	HB-14-20-075	Bolt $\frac{1}{4}$ - 20 x $\frac{3}{4}$	2
	HWL-14	Lockwasher $\frac{1}{4}$	2
	HW-14	Washer $\frac{1}{4}$	2
8*	26-055	Fuel Tank Drain	1
*	26-054	Rubber Grommet	1
	8800-45	Fuel Hose	1
	18-186	Hose Clamp	2
9	HB-12-13-500	Bolt $\frac{1}{2}$ - 13 x 5	2
	HNFL-12-13	Flange Whiz Lock Nut $\frac{1}{2}$ - 13	2
10	42-015	Attachment Mount	1
11	42-273	Battery Box	1
12	HB-516-18-200	Bolt $\frac{5}{16}$ - 18 x 1	1
	HNFL-516-18	Flange Whiz Lock Nut $\frac{5}{16}$ - 18	1
13	42-248	Battery Hold-down	1
	15-020	Grip	1
14	HB-516-18-225	Bolt $\frac{5}{16}$ - 18 x $2\frac{1}{4}$	2
	HNFL-516-18	Flange Whiz Lock Nut $\frac{5}{16}$ - 18	2
15	HB-516-18-225	Bolt $\frac{5}{16}$ - 18 x $2\frac{1}{4}$	1
	HW-516	Washer $\frac{5}{16}$	3
	HNFL-516-18	Flange Whiz Lock Nut $\frac{5}{16}$ - 18	1
16	42-773	Gas Tank Bracket	1
17	HB-14-20-075	Bolt $\frac{1}{4}$ - 20 x $\frac{3}{4}$	2
	HW-14	Washer $\frac{1}{4}$	2
	HWL-14	Lock Washer $\frac{1}{4}$	2
18	23-006	Oil Filter	1
	23-031	Replacement Filter	1
19	34-123	Elbow	2
20	26-034	Ball Stud	2
21	13-569	Gas Shock	1
22	42-772	Seat Panel	1
23	43-157	Wire Cover	1
	HB-14-20-075	Bolt $\frac{1}{4}$ - 20 x $\frac{3}{4}$	2
	HNFL-14-20	Flange Nut $\frac{1}{4}$ - 20	2
24*	42-814-03	Fuel Level Gauge	1
25*	42-814-04	Top Draw	1
	8800-45	Fuel hose (goes to fuel pump on engine)	1
26*	42-814-05	Vent Check Valve	1
	8800-20	Hose (goes to carb canister)	1
27	42--815	Carb Canister Mount Bracket	1
28	8-688	Carb Canister Clip Mount	1
29	8-689	Carb Canister	1
	8-693	Hose Connector	1

OIL TANK DRAWING



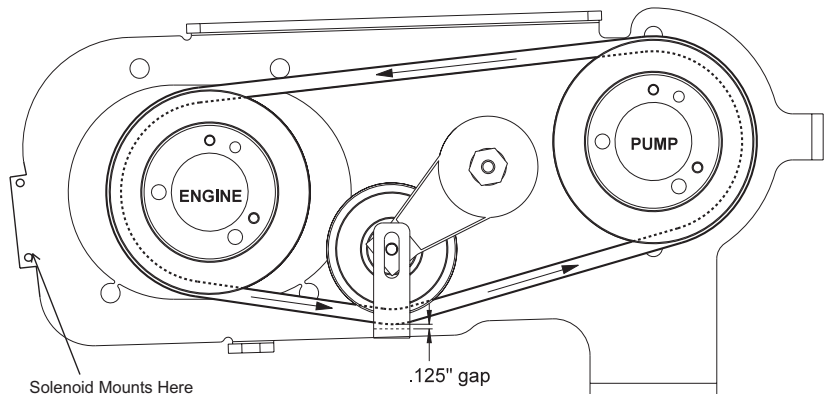
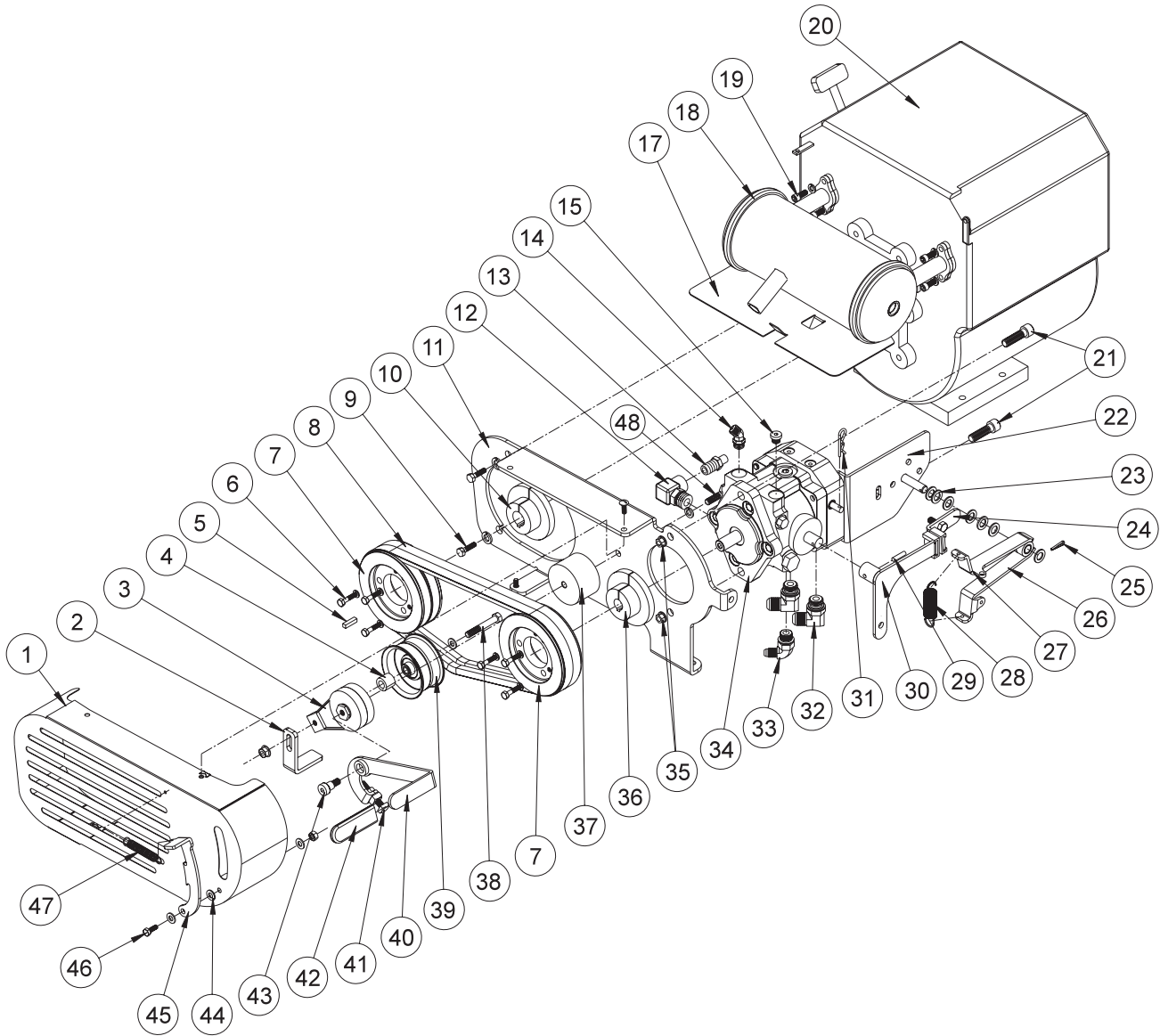
Parts

OIL TANK PARTS LIST

REF#	PART#	DESCRIPTION	QUANTITY
1	13-747	Filler Breather	1
	13-586-03	Neck	1
	HSM-10-32-063	Machine Screw 10 -32 x $\frac{5}{8}$	6
2	42-005	Oil Tank	1
3	23-126	#6 Plug	1
4	18-240	Adapter	1
5	18-072	45° Elbow	1
6	18-133	Barb Fitting	1
7	HB-14-20-075	Bolt $\frac{1}{4}$ - 20 x $\frac{3}{4}$	2
	HW-14	Washer $\frac{1}{4}$	2
	HWL-14	Lock Washer $\frac{1}{4}$	2
8	42-774	Oil Tank Bracket	1
	HB-516-18-225	Bolt $\frac{5}{16}$ - 18 x $2\frac{1}{4}$	2
	HNFL-516-18	Flange Whiz Lock Nut $\frac{5}{16}$ - 18	2
10	HB-12-13-500	Bolt $\frac{1}{2}$ - 13 x 5	2
	HNTL-12-13	Top Lock Nut $\frac{1}{2}$ - 13	2
11	50-081	Rubber Bumper	1
	HNFL-38-16	Flange Whiz Lock Nut $\frac{3}{8}$ - 16	1
12	HB-14-20-100	Bolt $\frac{1}{4}$ - 20 x 1	2
	HW-516	Washer $\frac{5}{16}$	2
	HW-14	Washer $\frac{1}{4}$	2
	HWL-14	Lock Washer $\frac{1}{4}$	2
14	18-337	Tee	1
15	23-189	90° Elbow	1
17	HB-38-16-200	Bolt $\frac{3}{8}$ - 16 x 2	1
	HW-38	Washer $\frac{3}{8}$	1
	HNFL-38-16	Flange Whiz Lock Nut $\frac{3}{8}$ - 16	1
18	42-378	Left Tank Bracket	1
19	42-015	Attachment Mount	2

PUMP AND ENGINE DRAWING

PARTS



Belt Routing

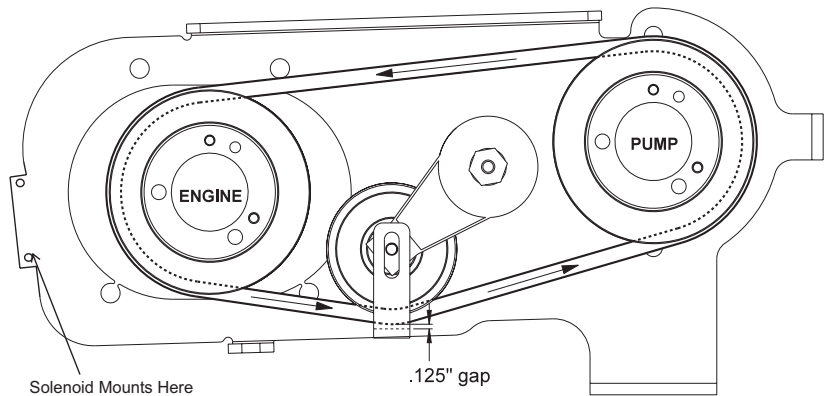
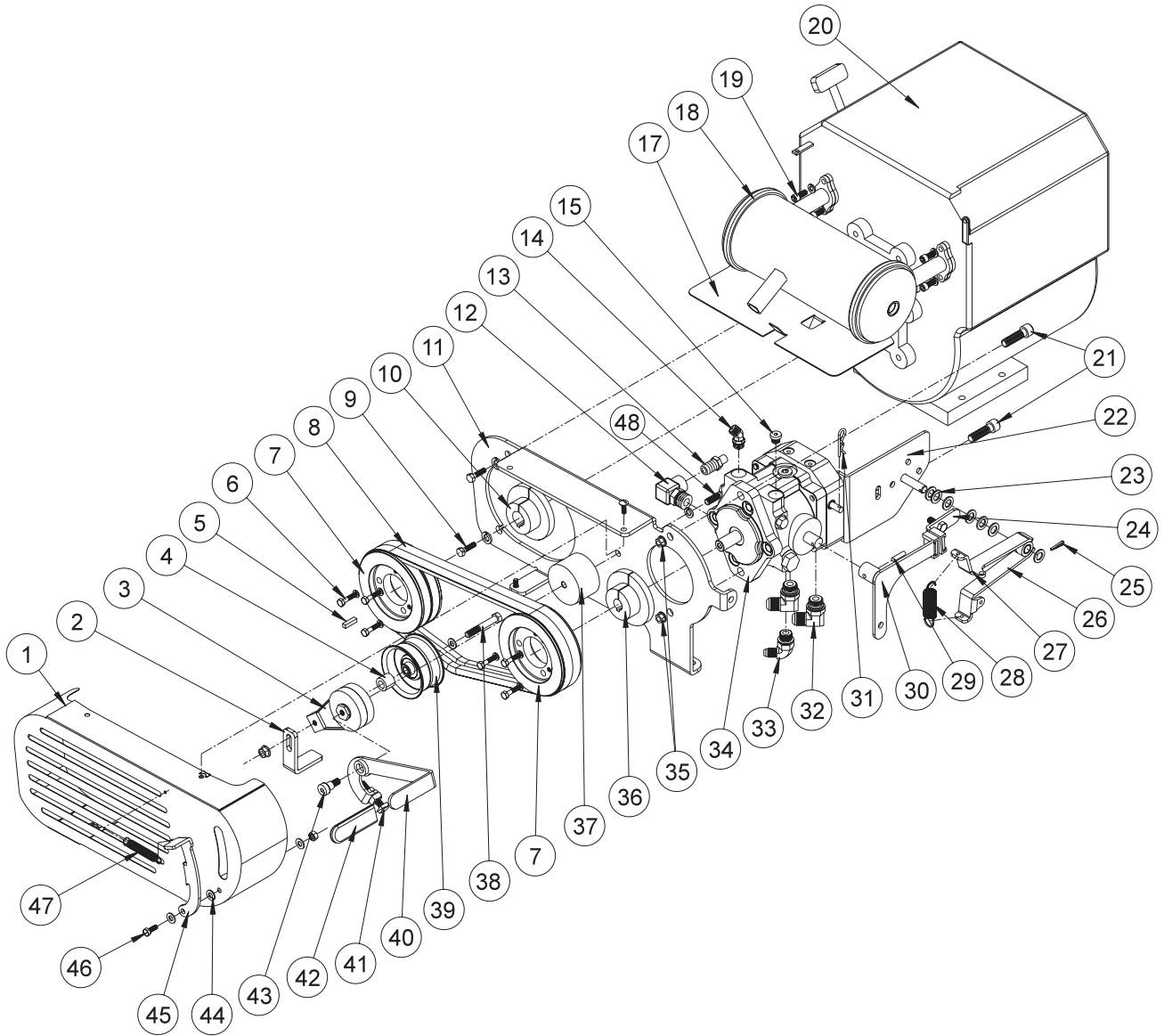
PUMP AND ENGINE PARTS LIST

REF#	PART#	DESCRIPTION	QUANTITY
1	42-353	Belt Guard	1
	78-274	Cage Nut	2
	HB-14-20-075	Hex Bolt, 1/4 -20 x 3/4	2
	HWL-14	Lock Washer, 1/4	2
2	42-357	Belt Stop	1
3	42-327	Tensioner	1
4	16-990	Spacer	1
5	HKSQ-14-100	Machine Key 1/4 x 1/4 x 1	1
6	HB-14-20-125	Bolt 1/4 - 20 x 1 1/4 (comes with 42-245 & 42-246)	6 (3 per hub)
	HW-14	Lockwasher (comes with 42-245 & 42-246)	6 (3 per hub)
7	42-331	Pulley	2
8	42-359	Belt	2
9	HB-716-14-100	Bolt 7/16 - 14 x 1	4
	HWL-716	Lockwasher 7/16	4
10	42-245	Hub 1"	1
11	42-354	Pump Mount	1
12	23-130	Elbow 90°	1
13	18-133	Barb Fitting	1
14	18-188	Elbow 45°	1
15	23-126	Plug	1
16	18-232	Elbow 90°	2
17	42-601	Heat Shield	1
	18-222	Hose Clamp	2
18	42-600		1
19	HSSHSM-8-1.25-20	Metric Cap Screw M8 - 1.25 x 20	4
	HWLM-8	Lockwasher M8	4
20	15-165	Engine B&S 16 HP	1
	15-165-01	Air Filter Element with Pre-Cleaner (comes with engine)	1
	13-531	Engine Oil Filter (comes with engine)	1
	13-491	Oil Switch	1
	13-492	Solenoid	1
21	HSSH-12-13-175	Socket Screw 1/2 - 13 x 1 3/4	2
22	42-279	Filter Mount	1
	HW-38	Washer 3/8	2
23	HMB-12-14	Machine Bushing 1/2 x 14 GA	7
24	42-247	Creep Arm	1
	8946-1.5	Wear Strip (part of 42-247)	1
	HRS-316-050	Rivet (part of 42-247)	1
	HB-38-16-100	Bolt 3/8 - 16 x 1	2
	HNFL-38-16	Flange Whiz Lock Nut 3/8 - 16	2
25	HP-18-100	Cotter Pin 1/8 x 1	1
26	42-312	Bottom Centering Arm	1
	18-234	Bushing (part of 42-312)	1
27	42-311	Top Centering Arm	1
	18-234	Bushing (part of 42-311)	1
28	11-050	Extension Spring	1
29	HRP-14-100	Roll Pin 1/4 x 1	1
30	42-308	Swash Arm	1
	8946-1	Wear Strip (part of 42-308)	1
	HRS-316-050	Rivet (part of 42-308)	1

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PUMP AND ENGINE DRAWING

PARTS

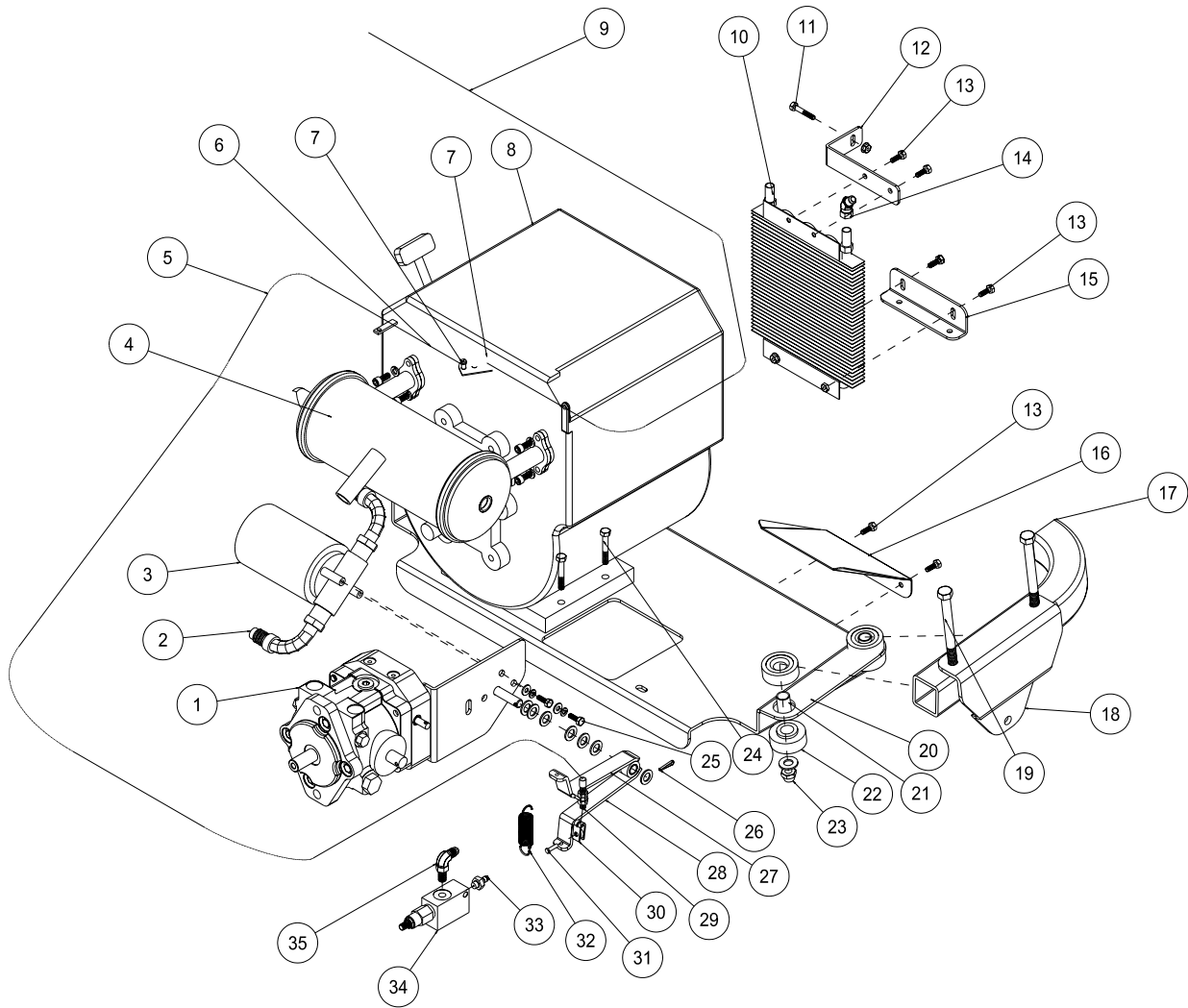


Belt Routing

PUMP AND ENGINE PARTS LIST

REF#	PART#	DESCRIPTION	QUANTITY
31	HHP-18	Bridge Pin $\frac{1}{8}$	1
32	18-174	Elbow 90°	2
33	18-185	Elbow	1
34	34-109	Variable Pump	1
35	HNFL-12-13	Flange Whiz Lock Nut $\frac{1}{2}$ - 13	2
36	42-246	Hub $\frac{3}{4}$	1
	HWK-316-075	W	1
37	42-361	Tensioner Spacer	1
38	HB-38-16-275	Hex Bolt, $\frac{3}{8}$ -16 x 2 $\frac{3}{4}$	1
	HNFL-38-16	Flange Whiz Lock Nut, $\frac{3}{8}$ -16	1
	HW-38	Flat Washer, $\frac{3}{8}$	1
39	42-358	Idler Pulley	1
	42-338	Oilite Bushing	1
40	42-355	Clutch Handle	1
41	HSSQ-38-16-150	Socket Head Square Screw $\frac{3}{8}$ - 16 x 1 $\frac{1}{2}$	1
	HN-38-16	Hex Nut, $\frac{3}{8}$ - 16	1
42	15-020	Grip	1
43	42-352	Hex Socket Head shoulder Screw	1
44	HW-38	Flat Washer, $\frac{3}{8}$	3
45	42-356	Lock Handle	1
46	HB-516-18-075	Hex Bolt, $\frac{5}{16}$ -18 x $\frac{3}{4}$	1
	HNTL-516-18	Lock Nut, $\frac{5}{16}$ -18	1
47	16-046	Spring	1
48	HB-38-16-250	Hex Bolt, $\frac{3}{8}$ -16 x 2 $\frac{1}{2}$	1
	HWL-38	Lock Washer, $\frac{3}{8}$	1

ENGINE DRAWING

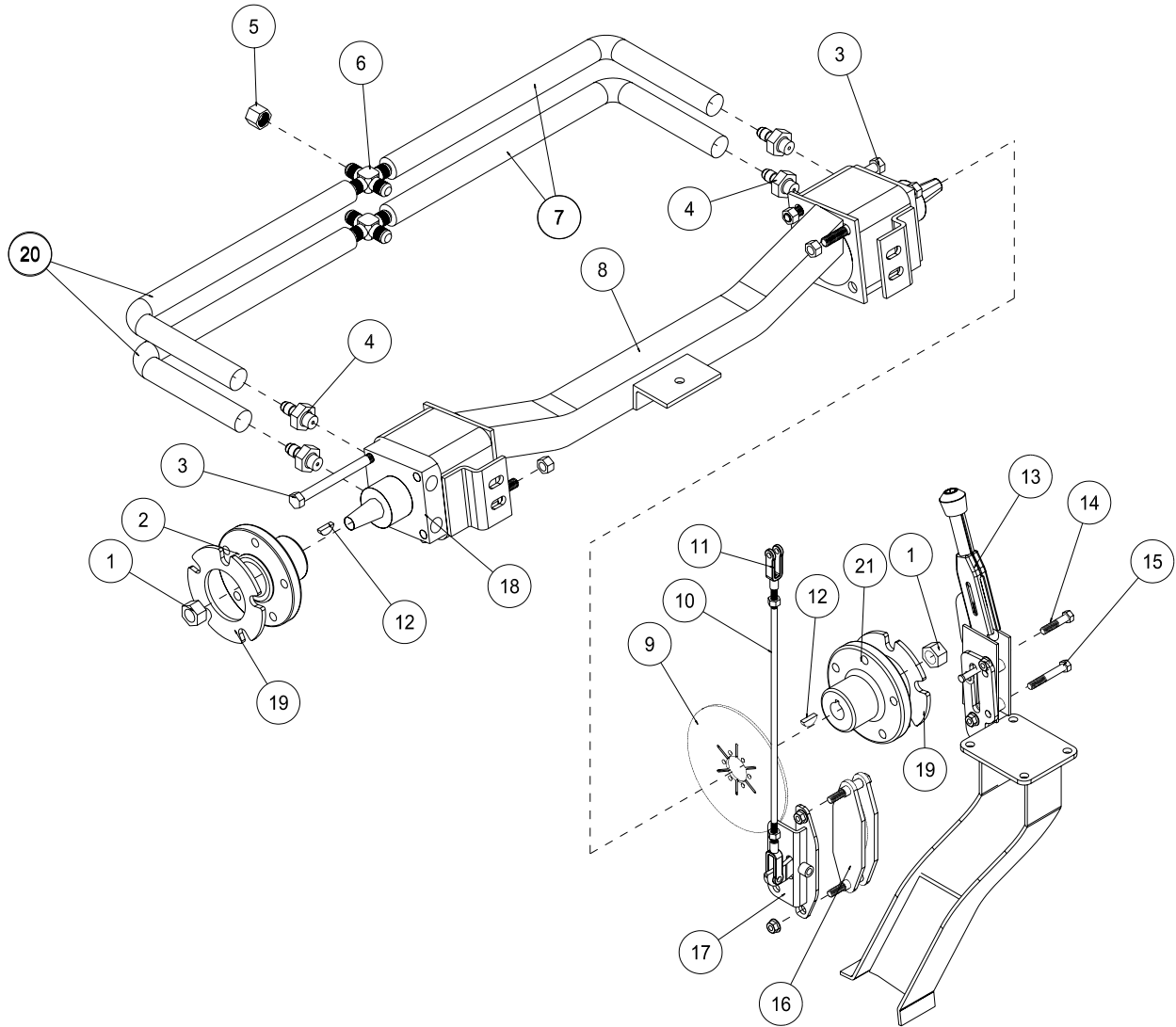


Parts

ENGINE PARTS LIST

REF #	PART #	DESCRIPTION	QUANTITY
1	34-109	Variable Pump	1
2	42-307	Cable Bracket	1
3	HB-516-18-100	Bolt $\frac{5}{16}$ - 18 x 1	2
	HW-516	Washer $\frac{5}{16}$	2
	HNTL-516-18	Lock Nut $\frac{5}{16}$ - 18	2
4	42-600		1
5	17-152	Conduit	1
6	17-151	Cable	1
7	21-161	Wire Block	4
8	15-165	Engine B&S 16 hp	1
9	21-463	Throttle	1
10	42-265	Aluminum Oil Cooler	1
11	HB-14-20-150	Bolt $\frac{1}{4}$ - 20 x $1\frac{1}{2}$	1
	HNFL-14-20	Flange Whiz Lock Nut $\frac{1}{4}$ -20	1
12	42-771	Top Cooler Bracket	1
13	HB-14-20-075	Bolt $\frac{1}{4}$ - 20 x $\frac{3}{4}$	4
	HNFL-14-20	Flange Whiz Lock Nut $\frac{1}{4}$ - 20	4
14	18-214	Elbow 45°	1
15	42-275	Bottom Cooler Bracket	1
17		Main Frame	
18	42-015	Attachment Mount	2
19	HB-12-13-500	Bolt $\frac{1}{2}$ -13 x 5	4
20	42-269	Engine Plate	1
21	60-168	Spacer	4
22	60-107	Rubber Bushing	8
23	HNFL-12-13	Flange Whiz Lock Nut $\frac{1}{2}$ - 13	4
	HW-12	Washer $\frac{1}{2}$	4
24	HB-516-18-225	Bolt $\frac{5}{16}$ - 18 x $2\frac{1}{4}$	4
	HNFL-516-18	Flange Whiz Lock Nut $\frac{5}{16}$ - 18	4
25	HP-18-100	Cotter Pin $\frac{1}{8}$ x 1	1
	HMB-12-14	Machine Bushing $\frac{1}{2}$ x 14 GA	7
26	42-311	Top Centering Arm	1
	18-234	Bushing (part of 42-311)	1
27	42-312	Bottom Centering Arm	1
	18-234	Bushing (part of 42-312)	1
28	17-155	Retainer	1
	HN-516-24	Nut $\frac{5}{16}$ - 24	2
29	17-153	Clevis	1
30	HCP-14-075	Clevis Pin $\frac{1}{4}$ x $\frac{3}{4}$	1
	HP-332-075	Cotter Pin $\frac{3}{32}$ x $\frac{3}{4}$	1
31	11-050	Extension Spring	1
32	18-169	Adapter	1
33	42-192	Relief Valve	1
34	18-168	Elbow	1

REAR AXLE DRAWING



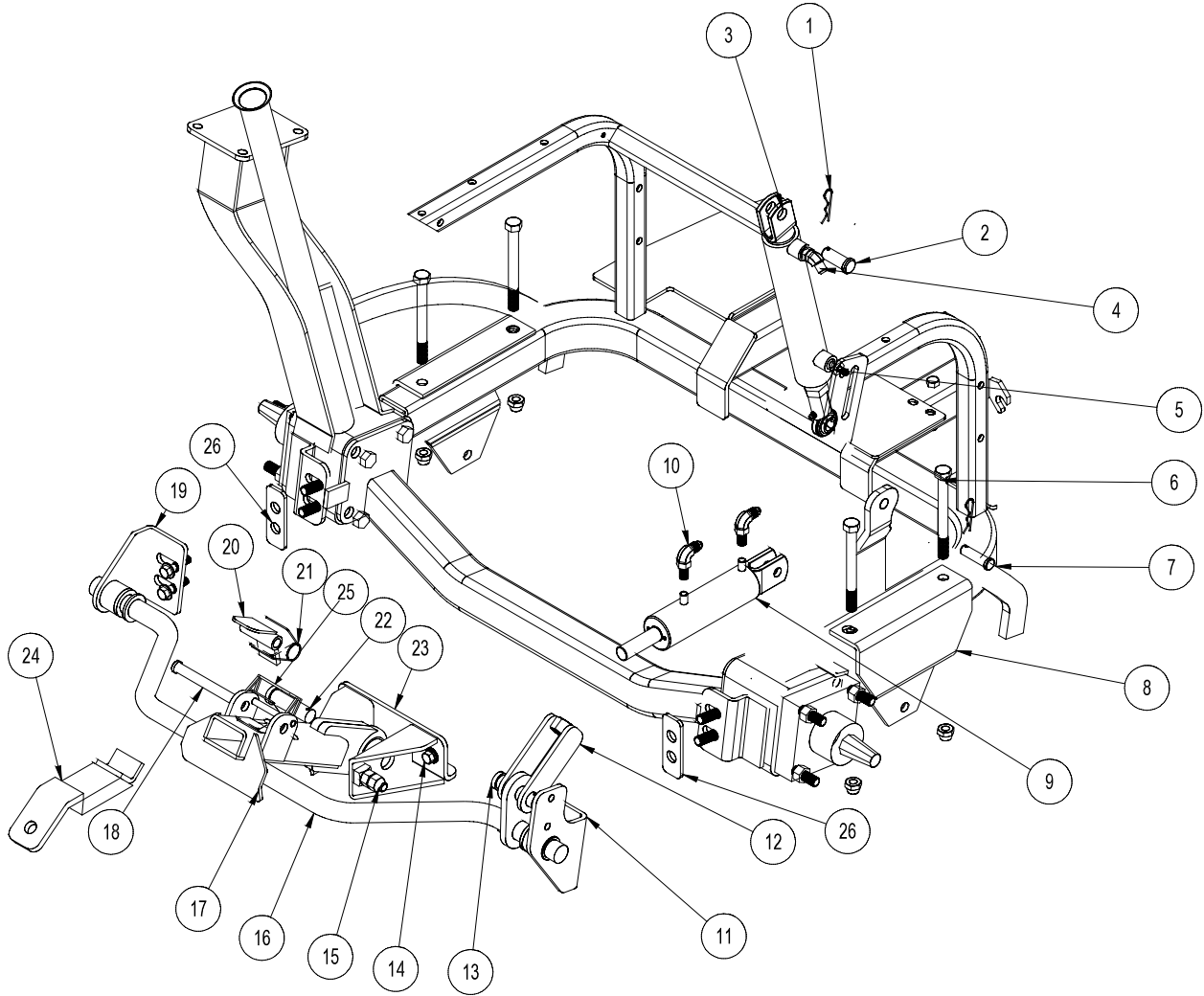
PARTS

REAR AXLE PARTS LIST

REF#	PART#	DESCRIPTION	QUANTITY
1	42-002-12	Nut $\frac{3}{4}$ - 16 (part of 42-002)	2
2	42-007	Hub	1
3	HB-12-13-650	Bolt $\frac{1}{2}$ - 13 x $6\frac{1}{2}$	8
	HNFL-12-13	Flange Whiz Lock Nut $\frac{1}{2}$ - 13	8
4	18-343	Adapters	4
5	18-344	Caps	2
6	18-342	Cross	2
7	42-261	$\frac{1}{2}$ " Hydraulic Tube x $27\frac{1}{2}$ "	2
8	42-425	Main Frame	1
9	50-041	Brake Disk	1
	42-176	Low Head Cap Screw $\frac{1}{4}$ - 20 x $\frac{3}{4}$	6
10	42-155	Brake Rod	1
	HN-516-24	Nut $\frac{5}{16}$ - 24	2
11	11-100	Linkage Yoke	2
	HCP-516-100	Clevis Pin $\frac{5}{16}$ x 1	2
	HP-18-100	Cotter Pin $\frac{1}{8}$ x 1	2
12	HWK-14-100	W (part of 42-002)	2
13	60-106	Brake Lever	1
14	HB-516-18-175	Bolt $\frac{5}{16}$ - 18 x $1\frac{3}{4}$	1
	HNFL-516-18	Flange Whiz Lock Nut $\frac{5}{16}$ - 18	1
15	HB-516-18-250	Bolt $\frac{5}{16}$ - 18 x $2\frac{1}{2}$	1
	HNFL-516-18	Flange Whiz Lock Nut $\frac{5}{16}$ - 18	1
16	50-042	Brake Caliper	1
	60-563	Disc Pad, Outside	1
	60-564	Disc Pad, Inside	1
17	42-151	Brake Bracket	1
18	42-002	Wheel Motor	2
19	42-305	Shim	2
20	42-304	$\frac{1}{2}$ " Hydraulic Tube x 27"	2
21	42-157	Right-hand Hub	1

RAKE LIFT DRAWING

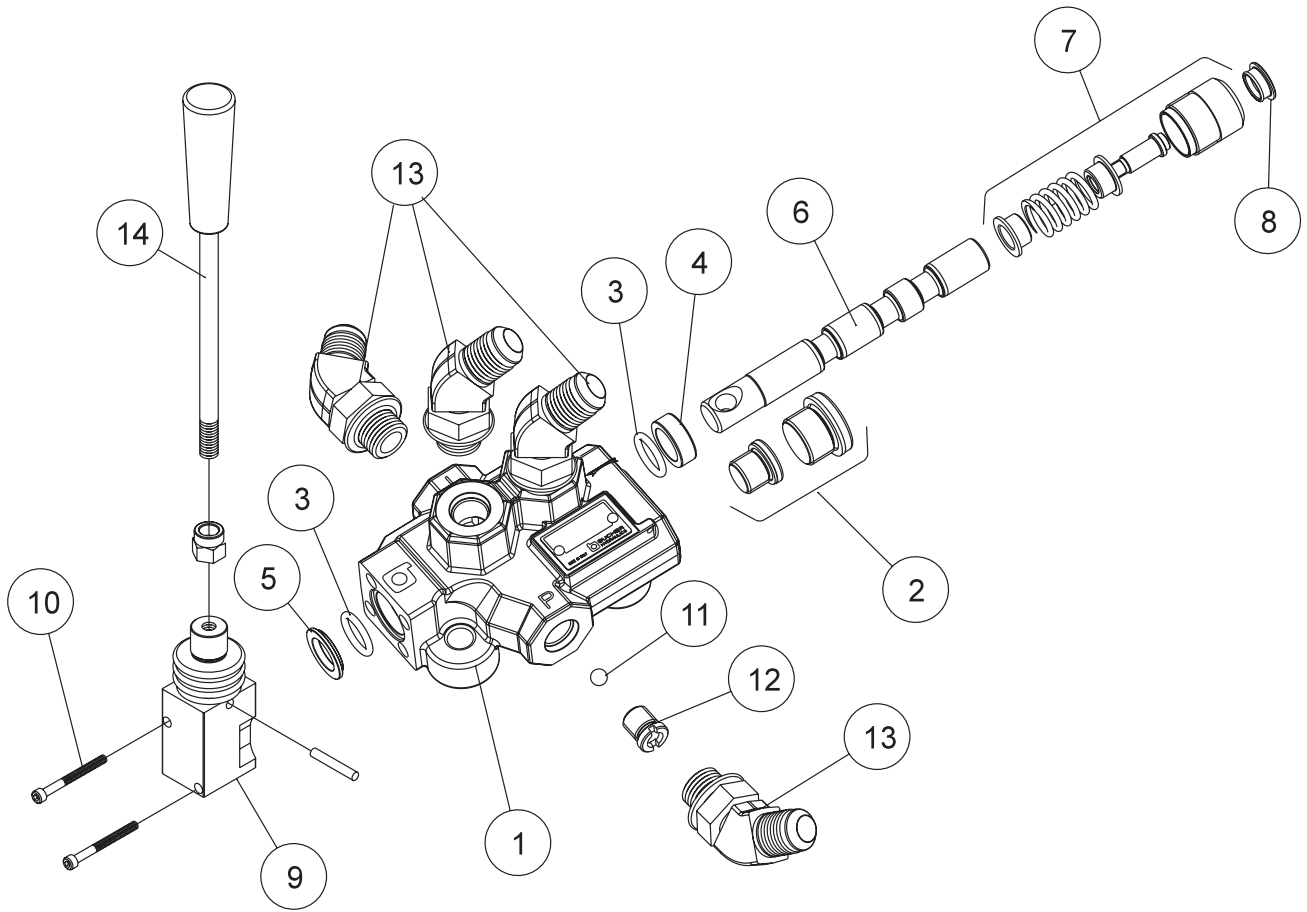
PARTS



RAKE LIFT PARTS LIST

REF#	PART#	DESCRIPTION	QUANTITY
1	HHP-18	Bridge Pin $\frac{1}{8}$	3
2	HCP-58-175	Clevis Pin $\frac{5}{8}$ - $1\frac{3}{4}$	1
3	10-135	Hydraulic Cylinder	1
	HNJ-58-18	Jam Nut $\frac{5}{8}$ - 18	1
	8-154	Rod End	1
	HG-14-28-180	Grease Fitting $\frac{1}{4}$ - 28 x 180°	1
4	18-214	45° Elbow	1
5	18-169	$\frac{3}{8}$ Adapter	1
6	HB-12-13-500	Bolt $\frac{1}{2}$ - 13 x 5	4
	HNFL-12-13	Flange Lock Nut $\frac{1}{2}$ - 13	4
7	HCP-12-300	Clevis Pin $\frac{1}{2}$ - 3	1
	HP-18-100	Cotter Pin $\frac{1}{8}$ x 1	1
8	42-015	Attachment Mount	2
9	43-150	Hydraulic Cylinder	1
10	18-168	90° Elbow	2
11	34-220	Pivot Bracket - RH	1
12	43-138	Lift Linkage	1
13	HCP-34-200	Clevis Pin $\frac{3}{4}$ x 2	1
14	HB-38-24-100	Bolt $\frac{3}{8}$ - 24 x1	2
15	HSSHB-12-13-200	Button Socket Head Cap Screw	2
	HN-12-13	Nut $\frac{1}{2}$ -13	2
	HNCL-12-13	Center Lock Nut $\frac{1}{2}$ - 13	2
16	43-137	Lift Bar	1
	15-019	Rubber Grip	2
17	43-141	Lift Arm	1
18	HCP-12-450	Clevis Pin $\frac{1}{2}$ - $4\frac{1}{2}$	1
19	34-219	Pivot Bracket - LH	1
20	43-139	Lock	1
21	43-136	Torsion Spring	1
22	HCP-78-350	Clevis Pin $\frac{7}{8}$ x $3\frac{1}{2}$	1
23	43-140	Frame Mount	1
24	43-143	Towing Hitch	1
25	25-382	Lock Pin	1

13-731 SINGLE-BANK HYDRAULIC VALVE DRAWING

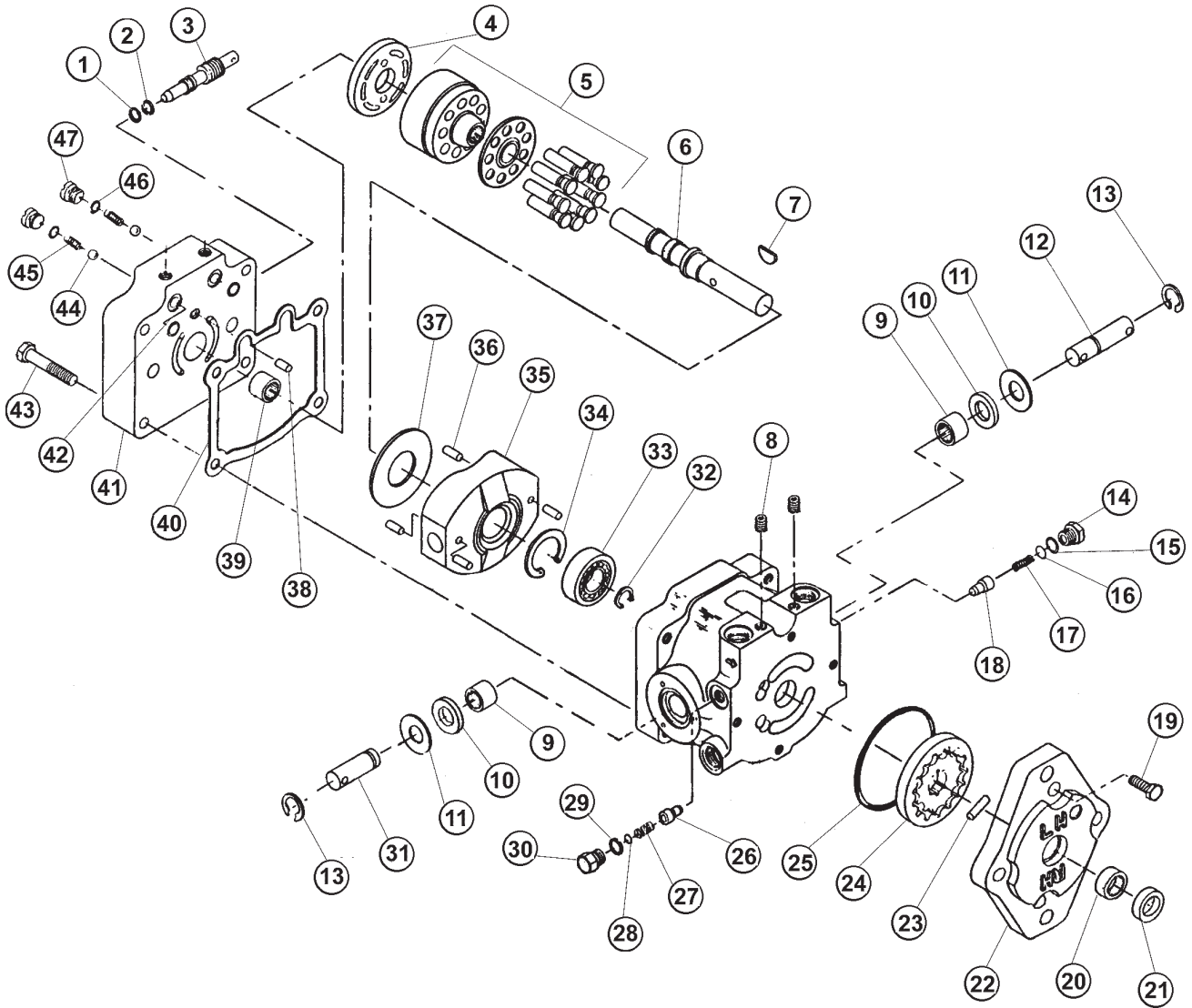


Parts

13-731 SINGLE-BANK HYDRAULIC VALVE PARTS LIST

REF #	PART #	DESCRIPTION	QUANTITY
1*	13-731-01	Actuator Housing Assembly	1
2*	13-731-02	Valve Plug	1
3*†	78-415-03	O-Ring Seal	2
4*†	78-415-05	Spacer	3
5*	78-415-04	Flanged Washer HDM10	3
6*	13-731-03	Spool	1
7*	78-415-11	Positioner	1
8*	78-415-08	Plug	3
9*	78-415-09	Lever Group HDS11	1
10*	78-415-10	Metric Socket Screw M5 x .8 x 45	2
11*	13-731-04	1/4" Ball	1
12*†	13-731-05	Check Valve	1
13	18-188	45° ELbow	4
14	78-417	Straight Handle	1
*†	13-731	Single Bank Hydraulic Valve (includes all * items)	
†	13-731-01	Actuator Housing Assembly	1 per Bank

34-109 VARIABLE PUMP DRAWING



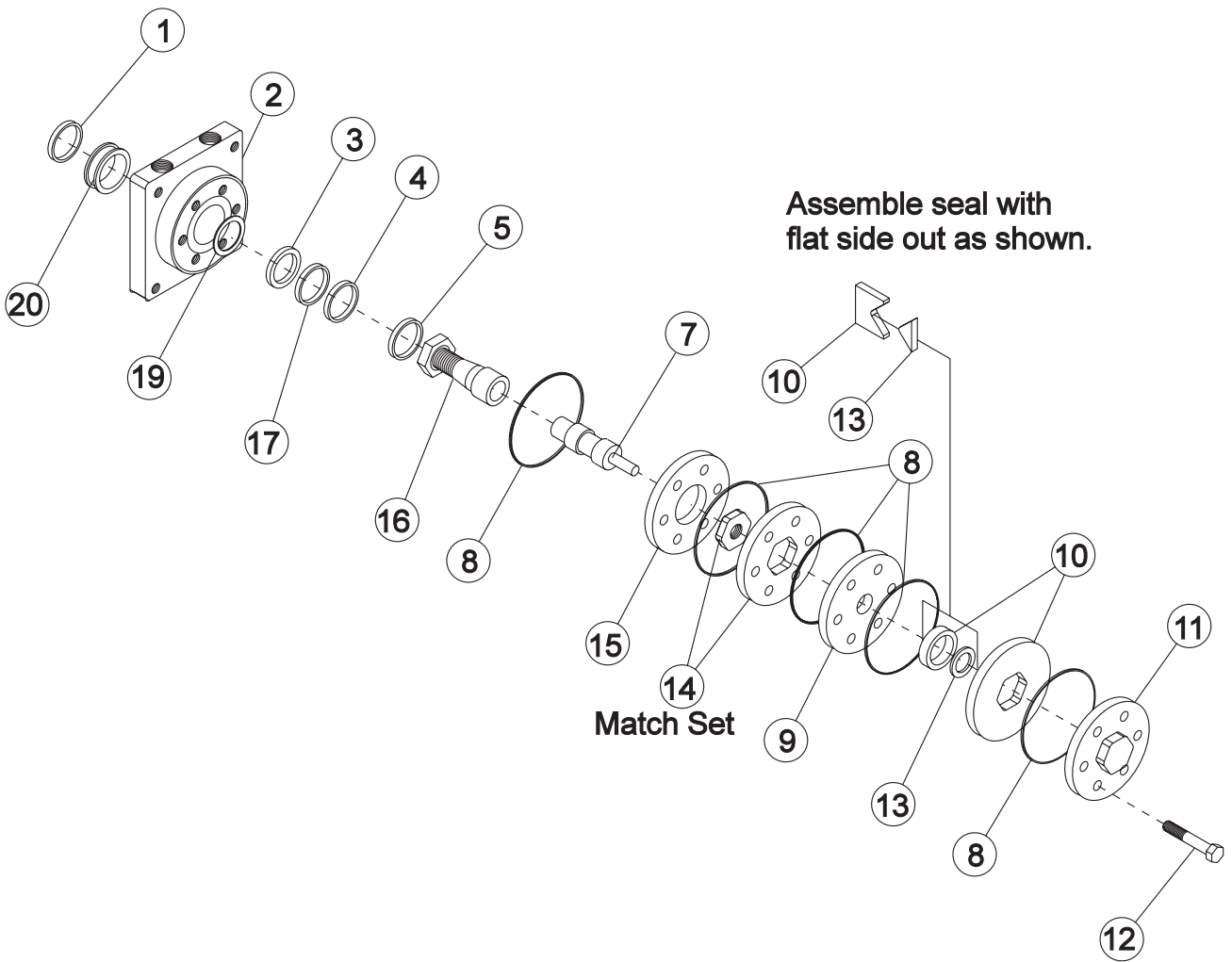
PARTS

34-109 VARIABLE PUMP PARTS LIST

REF #	PART #	DESCRIPTION	QUANTITY
1	14-222	O-Ring	1
2	14-130	Ring	1
3	13-110-01	By-Pass Valve	1
4	34-109-01	Valve Plate	1
5†		Cylinder Block	1
6		Pump Shaft with Bearing	1
7	14-131	W	1
8	13-110-05	Pipe Plug	2
9	14-069	Needle Bearing	2
10*	14-014	Lip Seal	2
11	14-113	Washer	2
12	14-220	Truncated Shaft (long 2 holes)	1
13	14-105	Retaining Ring	2
14	13-110-10	Plug	1
15*		O-Ring	1
16	14-235	Shim Pack Kit	1
17	14-263	Release Valve Spring	1
18	13-110-11	Release Valve Cone	1
19§	13-110-14	Hex Head Screw	4
20§	14-129	Needle Bearing	1
21*§	14-054	Lip Seal	1
22§	13-110-13	Charge Pump Housing	1
23§	14-135	Straight Pin	1
24§		Gerotor Assembly	1
25*§		O-Ring	1
26	14-235	Release Valve Cone	1
27	14-234	Check Release Valve Spring	1
28	34-109-03	Shim Pack Kit	1
29*		O-Ring	1
30	13-110-10	Plug	1
31	14-212	Truncated Shaft (short 1 hole)	1
32		Retaining Ring	1
33	42-003-10	Ball Bearing	1
34	14-132	Retaining Ring	1
35	14-221	Variable Swash Plate	1
36	14-216	Spring Pin	3
37	14-114	Thrust Plate	1
38	14-215	Pin	1
39		Roller Bearing (comes with 14-084 Ref# 6)	1
40*	14-107	Gasket	1
41†		Pump End Cap	1
42*		O-Ring	2
43	13-110-04	Hex Head Screw	4
44▣	13-110-09	Ball	2
45▣	13-110-08	Check Valve Spring	2
46*▣		O-Ring	2
47▣	13-110-07	Check Valve Plug	2

- * 14-098 Seal Kit 1
- † Parts are not available. Replace with new unit.
- § 13-110-15 Charge Pump 1
- ▣ 13-110-16 Check Valve Kit 2

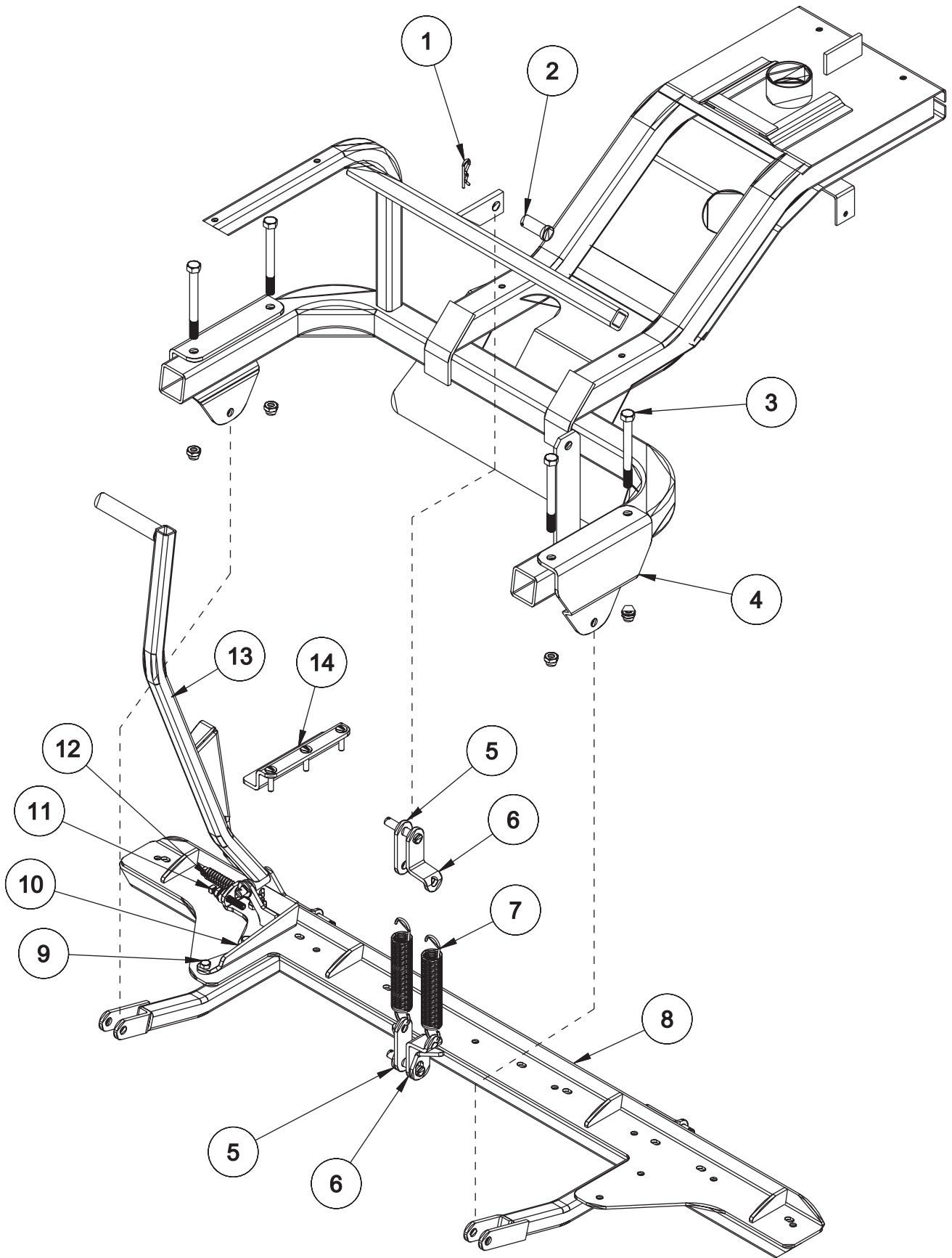
42-002 WHEEL MOTOR (8.0 C.I.) DRAWING



42-002 WHEEL MOTOR (8.0 C.I.) PARTS LIST

REF #	PART #	DESCRIPTION	QUANTITY
1*		Water & Dirt Seal	1
2	42-002-01	Service Housing Assembly	1
4	42-002-02	Thrust Bearing	1
5	42-002-03	Inner Bearing	1
7	42-002-04	Drive Link	1
8*		Ring Seal	5
9	42-002-05	Manifold	1
10	42-002-06	Commutator Assembly (matched set)	1
11	42-002-07	End Cap	1
12	42-002-08	Bolt	5
13*		Commutator Seal (matches with #10)	1
14	42-002-09	Rotor Set (matched set)	1
15	42-002-10	Wear Plate	1
16	42-002-11	Coupling Shaft	1
	HWK-14-100	W $\frac{1}{4}$ x 1	1
	42-002-12	Nut $\frac{3}{4}$ - 16	1
17	42-002-13	Thrust Washer	1
19*		Backup Ring	1
20	42-002-14	Outer Bearing	1
*	42-002-15	Seal Kit	1

42-401 MANUAL LIFT DRAWING

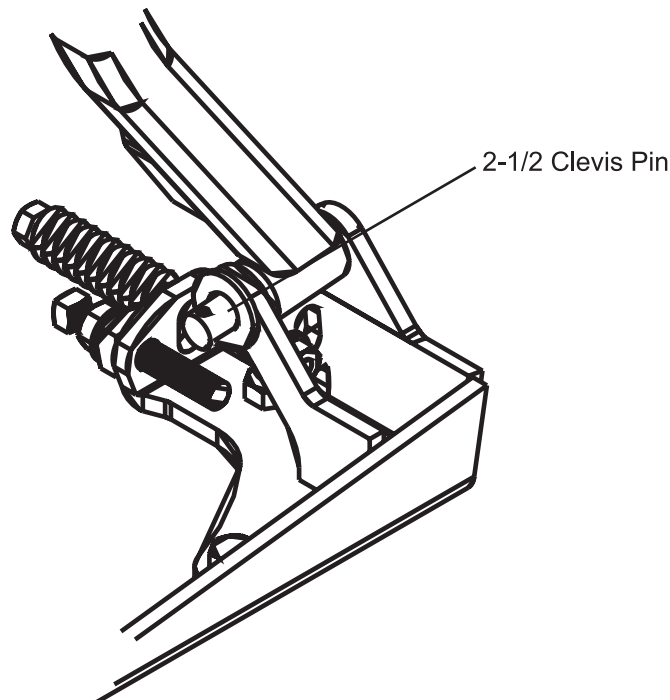


Accessories

42-401 MANUAL LIFT PARTS LIST

REF#	PART#	DESCRIPTION	QUANTITY
1	HP-18-100	Cotter Pin $\frac{1}{8}$ x 1	3
2	HCP-12-250	Clevis Pin $\frac{1}{2}$ x $2\frac{1}{2}$	3
	HW-12	Washer $\frac{1}{2}$	8
3		Bolt $\frac{1}{2}$ - $1\frac{3}{8}$ x 5	4
		Lock Nut $\frac{1}{2}$ - 13	4
4		Attachment Mount	2
5	42-383	Flat Spring Bracket	2
6	42-384		2
7	21-445	Spring	2
8		Attachment Lift	1
9	HB-38-16-125	Bolt $\frac{3}{8}$ - 16 x $1\frac{1}{4}$	3
	HNTL-38-16	Lock Nut $\frac{3}{8}$ - 16	3
10	42-382	Lift Handle Mount	1
11	HSSQ-38-16-250	Square Head Set Screw $\frac{3}{8}$ - 16 x $2\frac{1}{2}$	1
12	HB-516-18-400	Bolt $\frac{5}{16}$ - 18 x 4	1
	HW-516	Washer $\frac{5}{16}$	2
	11-055	Die Spring	1
	HNFL-516-18	Flange Whiz Lock Nut $\frac{5}{16}$ - 18	1
13	42-381	Attachment Lift Handle	1
	15-019	Round Grip	1
14	42-385	Handle Lock Bracket (Bolts to LH Floorboard)	1
	HSTP-516-18-150	Phillips Machine Screw $\frac{5}{16}$ - 18 x $1\frac{1}{2}$	3
	HW-516	Washer $\frac{5}{16}$	3
	HNTL-516-18	Lock nut $\frac{5}{16}$ - 18	3

Handle Attachment



DECAL LIST

This is a list of decals located on the Euro Star. Part number, description and location will help in reordering decals.

13-556	Decal, Warning	1	Left Side Below Seat
25-277	Decal, Battery	1	Bottom Seat
25-286	Decal, Pinch Point	1	Bottom Seat Panel
25-298	Decal, Warning Hot	2	Bottom Seat Panel. Oil Filter Bracket
25-337	Decal, Speed Boss	1	Hang from Steering
25-344	Decal, Smithco 3" Star	1	Steering Column
25-349	Decal, Foot Pedal	1	Right Side Nose Cone
25-352	Decal, By-Pass Valve	1	Hang Tag
25-354	Decal, Tire Pressure 5psi	2	Rear Wheels
25-357	Decal, Smithco	1	Front Nose Cone
25-359	Decal, Fluid Filled Tire	1	Front Tire
25-361	Decal, Technical Assistance	1	Main Frame
27-077	Decal, Smithco Round	1	Steering Cap
43-110	Decal, Super Star	2	Nose Cone
42-765	Decal, Lift Control	1	Right Body Top
42-593	Decal, Control Panel	1	Left of Seat

QUICK REFERENCE REPLACEMENT PARTS

REPLACEMENT FILTERS

23-031	Hydraulic Oil Filter	
15-165-01	Air Filter Element with Pre-Cleaner	Briggs and Stratton# 5050
42-076-03	Air Filter Element Fender Mounted	
50-403	Fuel Filter	
13-531	Engine Oil Filter	Briggs and Stratton# 492932

SEAL KITS

34-109	Variable Pump	
14-098	Seal Kit	
42-002 and 42-039	Wheel Motors	
42-002-15	Seal Kit	
42-220	2-BankHydraulic Valve	
14-062	Seal Kit	
14-106	Relief Assembly Kit	
14-203	Spring Centering Assembly Kit (1 per bank)	
43-150	Hydraulic Cylinder	
43-150-01	Seal Kit	

FLUIDS

Engine Oil	Refer to Engine Manual	
Hydraulic Fluid	SAE 10W-40 API Service SJ or higher Motor Oil	

OTHER PARTS

Spark Plugs	RC12YC (Gap 0.030 inch (0.76mm))
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The Smithco Commercial Products Two-Year Limited Warranty

Smithco, Inc. (Smithco) warrants your 2016 or newer Smithco Commercial Product (“Product”) purchased after October 1, 2016 to be free from defects in materials or workmanship for the period of time listed below. Where a warrantable condition exists, Smithco will repair the Product at no cost to you including diagnosis, labor (at the Smithco standard labor rate, subject to the Smithco flat rate schedule), and parts.

Warranty Duration is:

- (1) Two years, 1500 operational hours* from the date of delivery to the original purchaser or Five years from the date of original manufacturer of the product, whichever occurs first. (*Products equipped with hour meter).
- (2) Products used in rental situations are covered for 90 days from date of delivery to original user/renter.

Owner Responsibilities:

As the Product owner, you are responsible for required maintenance and adjustments stated in your Owner’s Manual. Failure to perform required maintenance and adjustments can be grounds for disallowing a warranty claim. **You are particularly responsible to train all present and future operators of this product on the safe operation of this product at your location.**

Instructions for Obtaining Warranty Service:

You are responsible for notifying the Authorized Smithco Products Distributor from whom you purchased the Product as soon as you believe a warrantable condition exists and not later than 30 days from discovery of the condition.

If you need help locating an Authorized Smithco Distributor, or if you have questions regarding your warranty rights or responsibilities, you may contact us at:

Smithco Product Support Department
200 West Poplar Ave.
Cameron, Wisconsin 54822
Telephone: 800-891-9435 E-Mail: ProductSupport@Smithco.com

Maintenance Parts:

Parts scheduled for replacement as required maintenance (“Maintenance Parts”), are warranted for the period of time up to the scheduled replacement time for that part.

Items/Conditions Not Covered:

Not all product failures or malfunctions that occur during the warranty period are defects in materials or workmanship. The items/conditions listed below are not covered by this warranty:



Product failures which result from the use of non-Smithco replacement parts, or from installation and use of



Product failures which result from failure to perform required maintenance and/or adjustments are not covered.



Product failures that result from operating the Product in an abusive, negligent or reckless manner are not covered.



This warranty does not apply to parts subject to consumption through use, unless found to be defective. Examples of parts which are consumed, or used up, during normal Product operation include, but are not belts, nozzles, etc.



include, but are not limited to, weather, storage practices, contamination, use of unapproved coolants, lubricants, additives, or chemicals, etc.



This warranty does not apply to normal “wear and tear” items. Normal “Wear and Tear” includes, but is not limited to, damage to seats due to wear or abrasion, worn painted surfaces, scratched decals or windows, etc.



Smithco may require the return of failed parts or components in order to determine the validity of any warranty claim.



Smithco will not be obligated to replace components of other manufacturers if inspection by the original component manufacturer indicates that failure was due to normal wear and tear, expected consumption through use or improper care or service.

Other Legal Disclaimers:

The above remedy for product defects through repair or replacement by an authorized Smithco distributor or dealer is the purchaser’s sole remedy for any defect.
which vary from state to state.

THERE ARE NO OTHER EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH ABOVE. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE ARE LIMITED TO THE DURATION OF THE LIMITED WARRANTIES CONTAINED HEREIN.

Some states may not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

THE SMITHCO COMPANY IS NOT LIABLE FOR INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH THE USE OF THE PRODUCT, INCLUDING ANY COST OR EXPENSE OF PROVIDING A SUBSTITUTE PRODUCT OR SERVICE DURING PERIODS OF MALFUNCTION OR NON-USE.

Some states may not allow the exclusion of indirect, incidental or consequential damages, so the above exclusion may not apply to you.

Smithco neither assumes, nor authorizes any person to assume for it, any other liability in connection with the sale or use of this product.

