5580-250 3/14/05 1:16 PM Page 1

Please read and save this Repair Parts Manual. Read this manual and the General Operating Instructions carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. The Safety Instructions are contained in the General Operating Instructions. Failure to comply with the safety instructions accompanying this product could result in personal injury and/or property damage! Retain instructions for future reference.

6" Trash Pumps

Description

This trash pump is a heavy duty, centrifugal, engine driven, self-priming (to 20 ft. lift), and transportable unit. Pump is equipped with precision lapped mechanical shaft seal to reduce the likelihood of leakage, and a clog resistant impeller capable of handling solids up to 3" in spherical diameter. Units are used to handle water containing stones, sticks, mud, and other solids (up to 20% by volume). O-ring sealed flange connection to provide leak-free low maintenance operation. Suction flange male NPT threaded for direct coupling to a standard NPS hose connector with rubber gasket. Liquid temperature range is 40° to 180° F (4° to 82° C). Maximum casing pressure if used in a flooded suction application is 50 psi. For use with nonflammable liquids that are compatible with pump component materials.

All models come equipped with a 12V electric starting system including automotive type 12V battery and cables. A fully plumbed and mounted 12 gallon marine grade plastic fuel tank is standard. All units equipped with a digital tachometer/hour meter.

Pump and engine are mounted on an easy maintenance sliding frame assembly. Frame can be mounted to transport trailer equipped with pneumatic tires, lighting system, rear stabilizer jacks, and 1-7/8" diameter ball mount tongue hitch. Trailer meets DOT requirements and is supplied with certificate of origin and VIN number. Check state and local requirements to register trailer/pump for highway towing.

Specifications

Suction inlet: 6" NPT (male)

Discharge outlet: 6" NPT (female)

Dimensions (overall): 7'-6" L x 4'-6" W x 4'-6" H

Engine: 5580-96: 27 HP Briggs & Stratton Vanguard
5581-96: 24 HP Honda GX670

Weight: 5580-96: 850 lbs
5581-96: 825 lbs

Basic Construction: Cast aluminum with cast iron volute, suction flange and discharge manifold, Viton silicon carbide shaft seal, Buna O-rings, Buna/Neoprene suction check valve.

Battery: 12 volt, BCI size 24, 500 min CCA @ 0° C

Unpacking

Refer to Repair Parts Illustration and Repair Parts List to aid in identifying parts. Unpack and separate all pump components from shipping/packaging materials, making sure all parts are accounted for. Retain all manuals for reference.

Package should contain:

1. Pump & engine completely assembled and mounted to rail assembly.
2. Trailer assembled except tail lights to prevent damage during shipping.
3. Manuals included: Specifications Information & Repair Parts Manual, Operating Instructions & Maintenance Manual, trailer instruction/owner's manual, engine instruction/owner's manual, and tachometer/hour meter instruction sheet.

Assembly

Tail light assembly installation:

1. Install driver side tail light assembly with license plate holder to trailer frame rail with 2 carriage bolts and nuts provided.
2. Connect red wire (light) to yellow wire (trailer)

Performance Chart

	GPM at Total Head in Feet										
Model	**10'**	**20'**	**30'**	**40'**	**50'**	**60'**	**70'**	**80'**	**90'**	**100'**	***Max. Head**
5580-96	970	950	900	850	730	600	450	250	100	0	100'
5581-96	970	950	900	850	730	600	450	250	100	0	100

5580-250 3/14/05 1:16 PM Page 2

6" Trash Pumps

with wire nut, connect two black wires (light) to yellow/brown wire (trailer) with wire nut.

3. Install passenger side tail light assembly to trailer frame rail with 2 carriage bolts and nuts provided.
4. Connect red wire (light) to brown wire (trailer) with wire nut, connect two black wires (light) to green wire (trailer) with wire nut.

NOTE: Follow all recommendations in general Operating Instruction & Maintenance Manual provided with this pump. In addition follow the specific recommendations that follow:

Installation:

Trailer mounted pump:

⚠ CAUTION ***To avoid trailer tipping set rear trailer stabilizer jacks before removing trailer from vehicle hitch.***

1. Always set trailer tongue stand and rear trailer stabilizer jacks before unhooking trailer hitch from vehicle tow ball.
2. Make sure pump and trailer are level and trailer wheels are blocked to prevent movement during operation.

Frame mounted pump:

3. Pump frame must be supported on a level firm surface. Anchoring pump frame to support surface is required to prevent movement during operation. A vibration dampening mounting system should be employed. Allow sufficient clearance around pump frame to perform routine maintenance.

All installations:

4. Suction line should be as short and direct as possible, have a constant slope up to the pump's suction port, and line diameter must match suction port diameter. If hose is used it must be non-collapsible.
5. Check condition of suction hose gaskets before installation. Weak, worn, leaking gaskets will allow an air leak at suction connection. If suction connection leaks air the pump will not prime.
6. Supports must be used to carry the weight of the suction and discharge lines. The pump should not be used to support the entire weight of the suction and discharge lines. Damage/breakage of pump ports may occur if lines are not supported.
7. If a check valve, or collapsible hose is used on discharge a means of venting air from the pump discharge manifold is required during the priming cycle. If air cannot escape from casing the pump will not prime.

LIFTING EYES

Pump frame is equipped with four 3/8-16x1" ID lifting eye bolts (Ref. No. A6) Eye bolts provided for lifting of pump frame on and off of transport trailer, and to lift complete pump/trailer assembly. Eye bolts rated for lifting pump, frame and trailer only.

⚠WARNING ***Remove suction and discharge lines and drain all liquid from pump before lifting.***

⚠WARNING ***Lift pump and trailer only. Do Not load piping, hoses or other equipment on trailer during lifting.***

Use adequate strength chain or cable assemblies (not supplied). Chain or cable must be attached to all four lifting eyes. A center lifting rig beam (not supplied) must be used to balance load and to prevent chain or cable from contacting fuel tank, engine, battery, or pump casing during lifting.

Operation

1. Fill engine with oil according to engine manufacturer's specifications listed in engine manual supplied.
2. Fill fuel tank with appropriate fuel for engine.
3. Fill pump casing with water through discharge manifold priming port. Casing must be full of water or pump will not prime.

⚠ CAUTION ***Do Not run pump dry, as permanent damage to the mechanical seal will result.***

4. Start the engine, following instructions in engine manual.
5. Run engine at full throttle during priming cycle. Tachometer should indicate 3500 rpm or greater.
6. After pump has primed and is producing full flow, engine speed should be regulated to

5580-250 3/14/05 1:16 PM Page 3

Models 5580 and 5581

produce desired pump performance level. Under high lift and/or low discharge head conditions engine speed should be decreased to retard cavitation. This will extend pump, seal, and engine service life.

⚠ CAUTION ***Do Not operate pump unattended. Shaft seal damage will occur if prime is lost or if flow is insufficient to keep the shaft seal cool.***

PUMP END DRAIN

Pump end is equipped with an NPT drain port. The port is located on the pump adapter plate (Ref No. 42) at the 6 o'clock position. An elbow (Ref No. 44) is installed in the port to direct the liquid down through frame. An indented hex pipe plug (Ref No. 45) is installed in elbow. A 9/16" L-hex wrench is provided to remove plug. A ball valve and length of pipe or hose (not supplied) may be installed to direct the drain liquid away from the pump.

ALWAYS DRAIN LIQUID:

1. After pumping operation is complete if freezing temperatures may be experienced.
2. Before transporting pump.
3. Before lifting pump.

SEAL WASH PORTS

These units are equipped with provisions for the addition of a seal wash hose (not supplied). When pumping water containing abrasive sediment, or when a build-up of material on the shaft seal is encountered, a seal wash may increase seal life. The pump adapter plate is equipped with two 1/8" NPT tapped ports; one at the (high pressure volute discharge) 10 o'clock position on adapter face and one on top of the locating boss (low pressure seal cavity).

NOTE: Fittings and hose must be compatible with liquid pumped, liquid temperature, and rated for maximum discharge pressure in the installation.

NOTE: Addition of seal wash hose may affect priming performance. After installing seal wash hose monitor length of time required to reach full prime.

Standard Installation: Remove 1/8" NPT plugs (Ref No. 43). Install appropriate fittings and hose between the two ports.

Abrasive Installation: Remove 1/8" NPT plugs. Install appropriate fittings and hose between the two ports. The installation of an in line abrasives separator is recommended. Contact appropriate manufacturer for details.

Clean Water Injection Installation: Remove 1/8" NPT pipe plug from low pressure port. Connect external clean water source line to low pressure port of adapter with appropriate hose and fitting. Incoming pressure must be at least 10 psi greater than seal cavity pressure. A check valve is recommended to prevent backflow.

TRANSPORT TRAILER

Transport trailer (Ref No. C1) supplied with pump assembly is for off road use only as shipped. Trailer registration for use on public roads is the responsibility of the owner. A Manufacturer's Certificate of Origin listing the Vehicle Identification Number is included with the trailer. Trailer registration requirements are regulated by each state and local government. Contact your State Department of Motor Vehicle or Department of Transportation for information and guidance on licensing or titling the trailer/pump for towing on public roads in your state.

Towing safety and operational guidelines:

⚠ CAUTION ***Follow all safety and operational rules listed in the trailer instruction manual supplied.***

1. Make sure vehicle is capable of towing the load. Make sure vehicle hitch is rated for the load.
2. Make sure the trailer coupler and hitch ball are the same sizes and rated for the load.
3. Make sure trailer coupler is correctly and safely connected to hitch ball.
4. Be sure to use safety chains supplied with trailer. Safety chains should be attached to towing vehicle at the same length on both sides and should not drag on the ground.
5. Never overload trailer. Trailer is rated to carry

5580-250 3/14/05 1:16 PM Page 4

6" Trash Pumps

pump, pump frame, and a full load of fuel. Loading other items on the trailer may cause GVW to exceed trailer rating.

⚠ CAUTION ***Maximum safe highway towing speed is 45 mph. Never allow passengers on the trailer.***

6. Check all lights for proper operation before each use.
7. Check tires for wear and proper inflation before each use. Inflate to psi rating on tire.
8. Check safety chains for wear and solid connection to trailer frame.

MAINTENANCE:

SLIDING ENGINE SLED OPERATION

Refer to Repair Parts pages.

⚠WARNING ***Disconnect spark plug wires and battery to prevent accidental starting.***

NOTE: Drain pump casing (Ref No. 36) by removing plug (Ref No. 45), discharge line, and suction line of all liquid before sliding engine sled.

1. Loosen six 1/2-13 nuts (Ref No. A13) that are pressing clamp angle (Ref. No. A5) to side angle (Ref. No. B1).

To access impeller/seal plate area:

2. Remove three 1/2-13x1-3/4" cap screws (Ref. No. 4) holding bearing housing adapter (Ref. No. 11) to pump adapter (Ref. No. 42).
3. Grasp frame spacer (Ref. No. B7) under fuel tank (Ref. No. B4) and slide engine/sled assembly back from pump adapter. Slide far enough to access impeller approximately 10" to 12".

NOTE: If engine/sled assembly will not slide back easily the seal plate (Ref. No. 10) may be stuck in pump adapter. Remove two 1/2"-13 x 1" bolts (Ref. No. 12) from bearing housing adapter. Insert two 1/2"-13 x 1-3/4" bolts and tighten evenly and slowly until seal plate loosens from pump adapter.

4. Tighten 1/2-13 nuts to prevent engine/sled from moving during maintenance procedure.

To access pump volute and inside of casing:

5. Loosen four 5/8-11 hex nuts (Ref. No. 2) holding casing to adapter. Slide 5/8" bolt (Ref. No. 1) from casing ear four places.
6. Grasp frame spacer under fuel tank and slide engine/sled assembly back from pump adapter. Slide far enough to access impeller approximately 10" to 12".
7. Tighten 1/2-13 nuts to prevent engine/sled from moving during maintenance procedure.

MECHANICAL SEAL REPLACEMENT

NOTE: Always replace the seal assembly (Ref. No. 7), and shaft sleeve (Ref No. 8) to ensure proper mating of mechanical components.

NOTE: Always inspect impeller stub shaft ball bearing (Ref. No. 15) during seal replacement. The bearing may have been damaged by leaking water. Refer to IMPELLER STUB SHAFT BEARING REPLACEMENT section.

1. Access impeller/seal plate area as described in SLIDING ENGINE SLED OPERATION section.
2. Unscrew impeller (Ref. No. 5) from the impeller stub shaft (Ref. No. 16). Turn the impeller counterclockwise. Use a rubber mallet or soft block of wood and hammer to loosen impeller. Remove any impeller shims (Ref. No. 6), shaft sleeve, and seal head from impeller stub shaft.
3. Remove two 1/2-13x1" cap screws (Ref No. 12) holding seal plate (Ref. No. 10) to bearing housing adapter (Ref. No. 11). Remove seal plate from bearing housing adapter.
4. Remove impeller shaft washer (Ref. No. 14) and inspect impeller stub shaft ball bearing for water damage or wear. Replace shaft washer with flat surface toward impeller.
5. Push seal seat from the seal plate recess with a screwdriver.
6. Clean the seal plate recess before inserting a new seal seat.
7. Carefully wipe the polished surface of the seal seat with a clean cloth.
8. Wet the rubber portion of the seal seat with a light coating of soapy water.

Models 5580 and 5581

9. Press the new seal seat squarely into the cavity in the seal plate. If the seal seat does not press squarely into the cavity, it can be adjusted in place by pushing on it with a piece of pipe. Always use a piece of cardboard between the pipe and the seal seat to avoid scratching the seal seat. (This is a lapped surface and must be handled very carefully.)
10. After the seal seat is in place, ensure that it is clean and has not been scratch or cracked.
11. Using a clean cloth, wipe the impeller stub shaft and make certain that it is clean.
12. Install seal plate and secure to bearing housing adapter face with two 1/2-13x1 cap screws.
13. Apply a light coating of soapy water to the inside rubber portion of seal head and slide onto the shaft sleeve. Slip the shaft sleeve and seal head onto the impeller stub shaft with seal head lapped surface towards seal seat lapped surface.
14. Replace any impeller shims removed during disassembly.
15. Screw the impeller back in place tightening until it is seated against shims and shaft sleeve.

NOTE: Make sure seal spring retainer is not pinched between impeller/shims and end of shaft sleeve.

16. Refer to section entitled Shim Adjustment at this time if shaft sleeve or any other parts listed therein have been replaced.
17. Check O-ring (Ref. No. 9), make sure it is not damaged or worn and is in position on seal plate.

NOTE: Always inspect O-ring seals. Replace when cracked or worn. Wet O-ring with soapy water for ease of assembly.

18. Slide engine/sled back into position aligning lead diameter on seal plate with adapter inside diameter. Replace three 1/2 -13x1-3/4 cap screws. Tighten six 1/2-13 hex nuts clamping side rails to frame rails.
19. Remount any other parts and reconnect spark plug wires and battery.

SHIM ADJUSTMENT

Manual method:

1. When installing a replacement impeller (Ref. No. 5), shaft sleeve (Ref. No. 8), bearing housing adapter (Ref. No. 11), seal plate (Ref. No. 10), or volute (Ref. No. 41), it may be necessary to vary the number of impeller shims (Ref. No. 6) that will be required. This is easily done by adding one shim more than was removed, and reassembling the pump as described in Mechanical Seal Replacement section.
2. Ensure that volute, adapter (Ref. No. 42), seal plate, and bearing housing adapter are fitted firmly. Check tightness of all fasteners.
3. Remove spark plug wires and bump engine over slightly with electric starter. If engine does not turn freely or interference between impeller and volute can be heard disassemble pump and remove one shim.

NOTE: When adding or removing shims, it is best to proceed with a 0.020" increment each time. If engine does turn freely add shims until it does strike, then remove a 0.020" shim. This will ensure maximum performance.

4. Proper running clearance is 0.020" to 0.040".
5. Follow the above procedure until proper clearance is obtained.

Measurement method:

1. When installing a replacement impeller, shaft sleeve, bearing adapter, seal plate, or volute, it may be necessary to vary the number of impeller shims that will be required. This can be accomplished by measurement with a suitable size depth micrometer or similar measuring instrument.
2. Measure depth from pump adapter-seal plate mounting surface to impeller face of volute. Measurement should be close to 5.960"
3. Add or remove impeller shims until height of impeller face to seal plate-pump adapter mounting surface measures 0.020" to 0.040" shorter than depth measured in previous step.

5580-250 3/14/05 1:16 PM Page 6

6" Trash Pumps

4. Slide engine/sled back into position aligning lead diameter on seal plate with adapter inside diameter. Replace three 1/2 -13x1-3/4 cap screws. Tighten six 1/2-13 hex nuts clamping side rails to frame rails.
5. Remove spark plug wires and bump engine over slightly with electric starter. If engine does not turn freely or interference between impeller and volute can be heard disassemble pump and remove one shim. Rotate engine again. Engine must rotate freely.

IMPELLER AND VOLUTE REPLACEMENT

Impeller and volute are subject to wear only by abrasive sand or sediment laden liquids. If badly worn, all these parts can be replaced and the pump thus restored to full efficiency.

NOTE: When the clearance between the impeller and the volute exceeds 1/16" at the face of the impeller or 1/8" on the outside diameter of the impeller, it may be necessary to take corrective action. The increased clearance can cause lengthened priming times and reduced pumping capacity. If both the priming and capacity of your unit are satisfactory for your application, it is recommended that no corrective maintenance be performed regardless of what clearances on your unit may have developed, since the increased clearances in themselves are not generally harmful to your pump. Normally, new pump clearances can be restored by simply shimming behind the impeller. If the impeller is badly worn it is recommended that the impeller be replaced. This is usually all that is required since only on unusually abrasive services does the cast iron volute show deterioration. Occasionally a stone or hard object might get caught in the impeller and cause damage to the volute/cutwater. In these cases, follow the instructions below for replacement.

1. Refer to SLIDING ENGINE SLED OPERATION section for procedure to access the volute and inside of the casing
2. Remove casing o-ring (Ref. No. 39) from outside diameter of volute (Ref. No. 41) flange.

⚠ CAUTION ***A mechanical means of supporting the volute during this procedure is recommended. The volute casting weighs 50 pounds.***

3. Remove three 1/2-13 cap screws (Ref. No. 40) holding volute to pump adapter (Ref. No. 42). Slide volute out of adapter machined pocket.
4. Replace worn parts as necessary.

NOTE: When replacing volute, attach new volute gasket (Ref. No. 38) to new volute with existing fasteners (Ref. No. 37).

NOTE: Before installing new parts, clean all mating surfaces thoroughly.

5. Install volute aligning flange outside diameter with adapter machined pocket. Replace three 1/2-13 cap screws. Check for interference between impeller face and volute by slowly rotating engine shaft. See SHIM ADJUSTMENT section for procedure to set impeller clearance.
6. Inspect casing o-ring for cracks or tears, replace if necessary. Install o-ring on outside diameter of volute flange.
7. Slide engine sled and engine assembly into casing, align outside diameter of volute flange with casing machined inside diameter, do not pinch casing o-ring. Install four 5/8-11 hex bolts and nuts. Tighten six 1/2-13 hex nuts clamping engine sled in position.

IMPELLER STUB SHAFT BEARING REPLACEMENT

These units are equipped with a permanently lubricated impeller shaft ball bearing (Ref. No. 15). This bearing supports the radial and axial loads produced by the impeller reducing the load on the engine crankshaft bearings. The bearing does not require lubrication but should be inspected periodically for wear or water damage from a leaking shaft seal. As part of a maintenance schedule the bearing should be replaced periodically.

1. Refer to SLIDING ENGINE SLED OPERATION section. Access impeller as described.

Models 5580 and 5581

2. Refer to MECHANICAL SEAL REPLACEMENT section. Follow steps 1 through 3; remove impeller, impeller shims, shaft sleeve, seal, and seal plate.
3. Remove shaft washer.
4. Remove four 7/16-14 cap screws (Ref. No. 13) attaching bearing housing adapter (Ref. No. 11) to engine (Ref. No. 18). Remove adapter from engine by sliding away from engine disengaging engine PTO shaft from impeller stub shaft (Ref. No. 16). Do not lose shaft key (Ref. No. 17).
5. On appropriate bearing press, press stub shaft and bearing from bearing housing adapter. Remove bearing from stub shaft.
6. Replace bearing with equivalent ball bearing. Reassemble bearing, stub shaft, and bearing adapter.
7. Insert shaft key into engine PTO shaft. Align shaft key with stub shaft keyway, slide stub shaft, bearing adapter assembly onto engine and secure with fasteners.

NOTE: Apply a light coating of anti-seize compound to shaft to prevent corrosion and galling.

8. Replace shaft washer onto stub shaft. Flat surface of shaft washer must face impeller.
9. Replace seal plate, shaft sleeve, seal, impeller shims, and impeller, turn clockwise to tighten. Refer to MECHANICAL SEAL REPLACEMENT section, follow step 12 and 14 through 19 for reassembly procedure.

CLEANING

These units are designed so that for most cleanout or clogging problems, it should not be necessary to remove hoses or piping. The suction area can be reached by removing two threaded handles (Ref. No. 33) and removing suction cleanout cover plate (Ref. No. 34) and o-ring (Ref. No. 35). To reach the impeller chamber or casing discharge areas follow procedures described in SLIDING ENGINE SLED OPERATION.

NOTE: When replacing cleanout cover plate, carefully wipe clean all surfaces on which the o-ring has contact. Also make sure the o-ring is in position in its groove.

ENGINE (DRIVER)

1. For information pertaining to the engine, engine service, and engine parts consult the Engine Manual or contact the nearest authorized service representative or the engine manufacturer.
2. Follow engine manufacturers operating and maintenance procedures and recommendations covered in the engine manual.
3. Use tachometer-hour meter installed on the engine to log operating hours. See tachometer-hour meter instruction sheet included for operating information. Perform engine maintenance according to recommended hour intervals listed in engine manual.
4. A length of pipe and elbow has been installed in the engine oil drain port to assist in changing the engine oil. Adding longer piping, hose, or a valve to fit each individual's maintenance requirements is left to the discretion of the operator.
5. Consult engine manual for engine warranty information needed. Any warranty issues concerning the engine must be addressed through the engine manufacturer. Warranty contact phone number, web site, Authorized Service Representative listing, and warranty directions are listed in the engine manual.

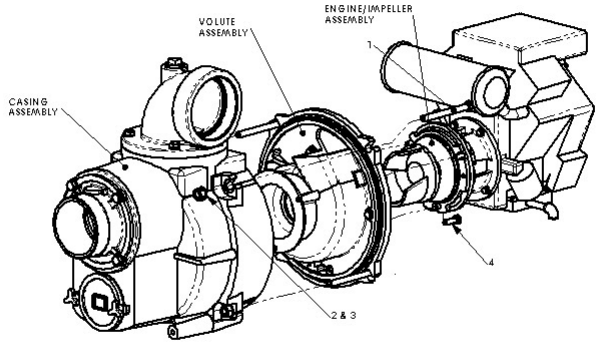
TRANSPORT TRAILER

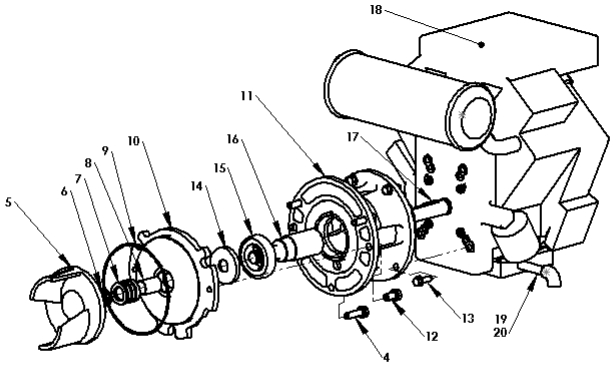
Transport trailer supplied with pump must be used and maintained according to procedures and guidelines listed in trailer instruction manual. Accessory parts, repair parts, and warranty claims should be directed through trailer manufacturer

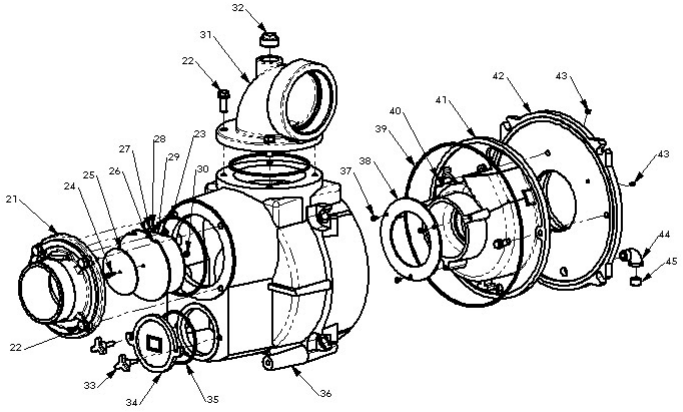
5580-250 3/14/05 1:16 PM Page 8

For Repair Parts, contact dealer where pump was purchased.

Please provide the following information:
-Model number
-Serial number (if any)
-Part description and number as shown in parts list







5580-250 3/14/05 1:16 PM Page 9

Pump Parts:

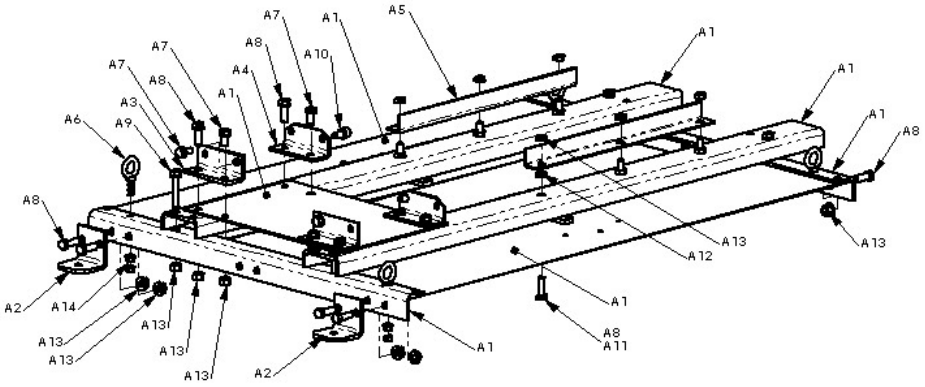
Ref No	Description	Part Number	Qty
1	5/8"-12UNC x 6-1/2 Hex head bolt	*	4
2	5/8"-12UNC Heavy hex nut	*	4
3	5/8" Flat washer	*	4
4	1/2"-13UNC x 1-3/4" Hex head cap screw	*	3
5	Impeller	5580-010-00	1
6	Impeller shim- 1 pkg contains 0.010", 0.020", 0.030"	1656-000-90	1
7	Seal assembly (separate part)	1640-167-90	1
	Seal assembly included in seal group	◊	1
8	Shaft sleeve	1555-000-01	1
9	No. 262 O-ring Buna 7.0" ID x 1/8" CS	◊	1
10	Seal plate	5580-031-00	1
11	Bearing housing adapter	5580-091-00	1
12	1/2"-13UNC x 1" Hex head cap screw	*	2
13	7/16"-14UNC x 1-1/4" Hex head cap screw	*	4
14	Impeller shaft washer	5580-141-00	1
15	Ball Bearing 45x85x19 #6209 double sealed	*	1
16	Impeller stub shaft	5580-140-00	1
17	1/4" square x 1-1/2" long drive key	*	1
18	Briggs and Stratton engine (5580-96)	1639-011-00	1
	Honda engine (5581-96)	1639-012-00	1
19	1/2" Neoprene backed seal washer	1806-002-00	1
20	Oil drain adapter 14mm to 3/8" NPT	1768-011-01	1
21	Suction flange 6" NPT male	5580-082-01	1
22	5/8-11 x 1-3/4" Hex head cap screw	*	8
23	No. 369 O-ring Buna 8.0" ID x 3/16" CS	◊	1
24	1/4"-20 UNC x 3/4" Hex head bolt	*	1
25	Check valve weight front	5580-072-00	1
26	Check valve (separate part)	5580-070-00	1
	Check valve Included in seal group	◊	
27	1/4"-20 UNC x 3/4" Hex head cap screw	*	2
28	1/4" Flat washer	*	2
29	Check valve weight	5580-071-00	1
30	1/4"-20 UNC Hex nut	*	1
31	Discharge manifold 6" NPT female	5580-081-01	1
32	1-1/2" NPT Pipe plug	*	1
33	3/8"-16 UNC x 1-1/4" Wing handle bolt	1601-000-00	2
34	Clean out cover	5580-040-00	1
35	No. 355 O-ring Buna 5-1/4" ID x 3/16" CS	◊	1
36	Casing	5580-001-00	1
37	1/4"-20 UNC x 1/2" Flat head screw	*	3
38	Volute gasket	◊	1
39	No. 386 O-ring Buna 17" ID x 3/16 CS	◊	1
40	1/2"-13 UNC x 1-1/2" Hex head cap screw	*	3
41	Volute	5580-150-00	1
42	Adapter	5580-030-00	1
43	1/8" NPT Pipe plug	*	2
44	3/4" NPT Street elbow	*	1
45	3/4" NPT Pipe plug	*	1
◊	Maintenance seal group includes: 7, 9, 23, 26, 35, 38, 39	5580-300-90	1

(*) Standard hardware item
(◊) Maintenance seal group
(_) Commercially available part, contact manufacturer listed or available from industrial supply catalog

5580-250 3/14/05 1:16 PM Page 10

For Repair Parts, contact dealer where pump was purchased.

Please provide the following information:
-Model number
-Serial number (if any)
-Part description and number as shown in parts list



Mounting Frame Parts List

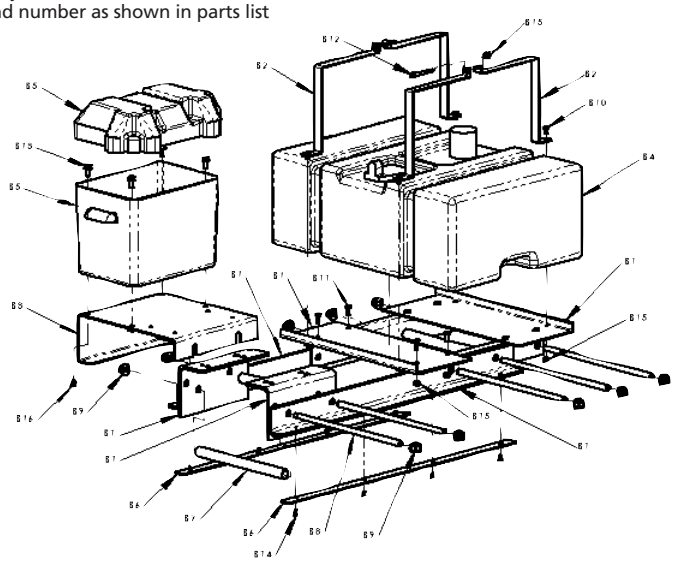
Ref No	Description	Part Number	Qty
A1	Frame includes: Frame rails, end mount angles, frame plate, side plates	5580-100-91	1
A2	Jack mount clips	5580-121-00	2
A3	Casing mount angle front	5580-105-00	2
A4	Casing mount angle rear	5580-104-00	2
A5	Clamp angle	5580-103-00	2
A6	3/8"-16 UNC Lifting eye bolt	1756-003-00	4
A7	1/2"-13 UNC x 1" Hex head bolt	*	6
A8	1/2"-13 UNC x 1-1/2" Hex head bolt	*	16
A9	1/2"-13 UNC x 2-3/4" Hex head bolt	*	4
A10	1/2"-13 UNC x 1" Socket head cap screw	*	2
A11	1/2" Lock washer	*	6
A12	1/2"-13 UNC Hex jam nut	*	6
A13	1/2"-13 UNC Hex nut	*	24
A14	3/8"-18 UNC Hex nut	*	8

(*) Standard hardware item
(◊) Maintenance seal group
(_) Commercially available part, contact manufacturer listed or available from industrial supply catalog

5580-250 3/14/05 1:16 PM Page 11

For Repair Parts, contact dealer where pump was purchased.

Please provide the following information:
-Model number
-Serial number (if any)
-Part description and number as shown in parts list



Engine Sled Parts List

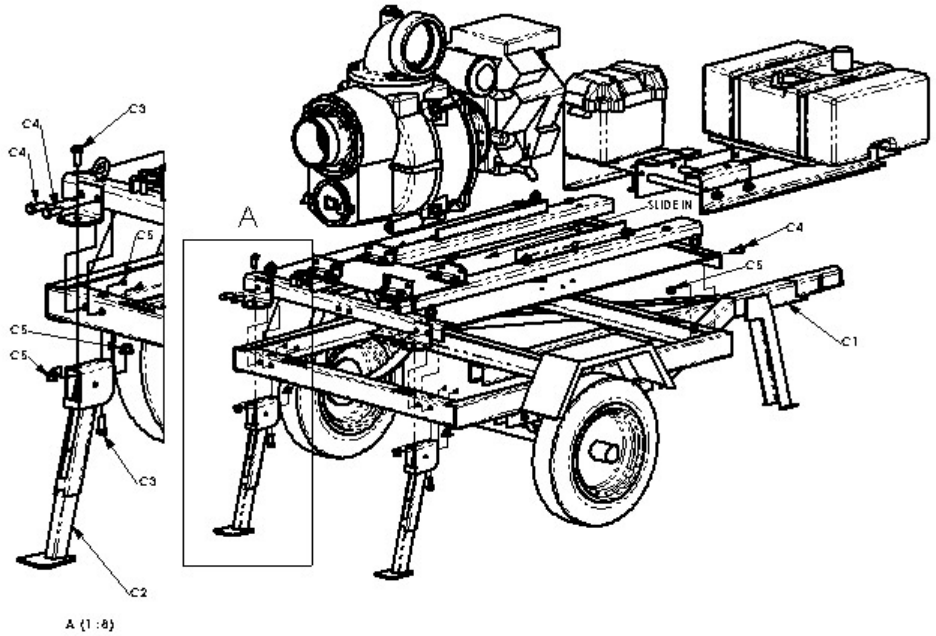
Ref No	Description	Part Number	Qty
B1	Sled includes: engine angles, tank plates, tank angles, side angles	5580-110-91	1
B2	Tank straps	5580-119-00	4
B3	Battery bracket	5580-118-00	1
B4	Fuel tank	_	1
B5	Battery Case -for group 24 battery	_	1
B6	Slip strip Nylon	5580-115-00	2
B7	Frame spacer	5580-113-00	5
B8	Tension rod	5580-114-00	5
B9	1/2"-13 UNC Hex nut	*	10
B10	1/4"-20 UNC x 1/2" Hex head bolt	*	4
B11	1/4"-20 UNC x 3/4" Hex head bolt	*	8
B12	1/4"-20 UNC x 2-1/2" Hex head bolt	*	2
B13	5/16"-18 UNC x 3/4" Hex head bolt	*	4
B14	#10-24 x 1/2 Flat head screw	*	8
B15	1/4"-20 UNC Hex nut	*	14
B16	5/16"-18 UNC Hex nut	*	4
Parts not shown:			
B17	Battery: 12V 500CCA BCI size 24	_	1
B18	Battery cable: top post 6 AWG x 10" long	_	1
B19	Battery grounding strap: top post 4 AWG x 13" long	_	1
B20	1/4" hose barb x 1/4" NPT Nylon hose fitting	_	1
B21	1/4" ID SAE 30R7 Fuel hose 2 ft long	_	1
B22	SAE #4 Worm drive hose clamp	*	2
B23	Mini tachometer hour meter	5580-354-00	1

(*) Standard hardware item
(◊) Maintenance seal group
(_) Commercially available part, contact manufacturer listed or available from industrial supply catalog

5580-250 3/14/05 1:16 PM Page 12

For Repair Parts, contact dealer where pump was purchased.

Please provide the following information:
-Model number
-Serial number (if any)
-Part description and number as shown in parts list



Trailer Mount Repair Parts List

Ref No	Description	Part Number	Qty
C1	Trailer	_	1
C2	Trailer stabilizer jack (1 pair)	5580-122-00	1
C3	1/2"-13 UNC x 1-1/4" Hex head bolt	*	4
C4	1/2"-13 UNC x 1-1/2" Hex head bolt	*	6
C5	1/2"-13 UNC Hex nut	*	10

(*) Standard hardware item
(◊) Maintenance seal group
(_) Commercially available part, contact manufacturer listed or available from industrial supply catalog