



MA1573001L.1

Item Numbers: A1573001, A1573011,
A1573021, A157306,
A1575581, A1571101
A1571104

Owner's Manual

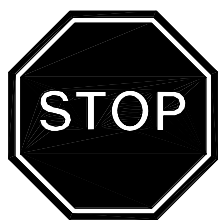
Pressure Washer Pump: For high pressure cleaning machines



⚠ WARNING

Read this manual.

Serious injury or death can result if safety instructions are not followed.



Pump is shipped with oil.

Must check oil level before use.

- Remove shipping tape and black vent plug (if present) from oil fill cap (Models A1573021, A1573011, A1573001, A157306).
- Remove shipping plug and install red vented fill cap. (Model 1575581).
- See pump oil cap section of this manual.

Closely inspect all components.

- If you have damaged components: Contact the freight company that delivered the unit and file a claim.
- If you have missing components: Contact Customer Service at 1-800-270-0810.

fig02342

Any Questions, Comments, Problems or Parts Orders
Call NorthStar Product Support 1-800-270-0810

Hazard Signal Word Definitions






	<p>This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.</p>
	<p>DANGER (red) indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.</p>
	<p>WARNING (orange) indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.</p>
	<p>CAUTION (yellow) indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.</p>
	<p>CAUTION (yellow) used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.</p>

fig01453

Table of Contents

Important Safety Instructions.....	4
Grounding Instructions.....	5
Pump Component Identification.....	6
Operation Instructions.....	7-8
Water Supply.....	7
Start-Up/Shut-Down Instructions.....	7
Applying Chemicals.....	8
Maintenance and Storage.....	9-11
Maintenance Mode and Maintenance Schedule.....	9
Pump Oil Change.....	10
Winter Storage.....	11
Troubleshooting.....	12
Specifications.....	13
Parts Exploded View.....	14-15
Pump Exploded Views.....	16-29
Limited Warranty.....	30

Important Safety Instructions

- ⚠ WARNING** - Risk of Injection or Injury to Persons - Do Not Direct Discharge Stream at Persons. - Do not use a hose if exterior damage is evident.
- Risk of explosion. - Do not spray flammable liquids. - Do not operate in a flammable environment.

- CAUTION** - Gun kicks back. Hold with both hands.
- To reduce the risk of injury, read operating instructions carefully before use.

- ⚠ WARNING** - When using this product basic precautions should always be followed, including the following:
- 1.) Read all the instructions before using the product.
 - 2.) To reduce the risk of injury, close supervision is necessary when the product is used near children. Do not allow irresponsible use by children. Always stop the product and bleed pressures before leaving unattended, disconnecting hoses or servicing the pump.
 - 3.) Know how to stop the product and bleed pressures quickly. Be thoroughly familiar with the controls.
 - 4.) Stay alert - watch what you are doing.
 - 5.) Do not operate the product when fatigued or under the influence of alcohol or drugs.
 - 6.) Keep operating area clear of all persons.
 - 7.) Do not overreach or stand on unstable support. Keep good footing and balance at all times. Wear footwear capable of maintaining a good grip on wet surfaces - Do not place the machine on soft or unstable ground.
 - 8.) Follow the maintenance instructions specified in all manuals. Do not run machine without sufficient lubrication or sufficient water to cool the pump.
 - 9.) Wear safety glasses, gloves, face protection and appropriate clothing when operating the machine.
 - 10.) Do not operate this machine with broken or missing parts. - Never alter the manufacturer's original design or deactivate any safety device on the machine.
 - 11.) Risk of exposure to dangerous chemicals. Wear protective gloves when handling and cleaning with chemicals. Follow the chemical manufacturer's directions. Understand all safety hazards and first aid for all chemicals being used. Check whether dangerous chemicals have been used and take any precautions that may have been recommended by the supplier of these chemicals when cleaning filters. Do not pump highly abrasive fluids or use with incompatible chemicals or solvents.
 - 12.) Know the pressure and temperature limits of your machine. Be sure all high-pressure accessories meet or exceed your machine's limits. Do not set the pressure relief valve above the machine's limit.
 - 13.) Do not move this machine by pulling on the hose. Do not use the pump to support other items of equipment that impose unacceptable loads on the pump. Do not attempt to use this machine as a prop.
 - 14.) To reduce risk of injury, do not secure the spray gun open. Your spray gun is equipped with a built-in trigger safety latch to guard against accidental trigger release and potentially dangerous high-pressure spray. Rotate the safety latch to the locked position when not spraying.
 - 15.) Do not clean this machine with its own spray. Cleaning should be done with a damp sponge with the motor OFF.
 - 16.) Always make sure all switches and controls are in the OFF position prior to plugging in the electrical cord. Do not stand in water while plugging and unplugging electrical cord.
 - 17.) This product is provided with a ground fault circuit interrupter built into the power cord plug. If replacement of the plug or cord is needed, use only identical replacement parts.
 - 18.) Keep a fire extinguisher rated "ABC" nearby.

SAVE THESE INSTRUCTIONS

Grounding Instructions

Your product must be grounded. If your product should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electrical shock. Your product should be equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

⚠ DANGER - Improper connection of the equipment - grounding conductor can result in a risk of electrocution. Check with a qualified electrician or service personnel if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug on your product - if it will not fit the outlet; have a proper outlet installed by a qualified electrician. Do not use any type adapter with this product.

GROUND FAULT CIRCUIT INTERRUPTER PROTECTION

Your electric pressure washer should have a ground fault circuit interrupter (GFCI) built into the plug of the power supply cord. This device provides additional protection from the risk of electric shock. Should replacement of the plug or cord become necessary, use only identical replacement parts that include GFCI protection. If your power supply cord does not include a built in (GFCI) ensure the receptacle is protected by a (GFCI).

Extension Cords

Use only 3-wire extension cords that have 3 prong grounding-type plugs and 3-pole cord connectors that accept the plug from the product. Use only extension cords that are intended for outdoor use. These extension cords are identified by a marking "Acceptable for use with outdoor appliances; store indoors while not in use." Use only extension cords having an electrical rating not less than the rating of the product. Do not abuse extension cord and do not yank on any cord to disconnect. Keep cord away from heat and sharp edges. Always disconnect the extension cord from the receptacle before disconnecting the product from the extension cord.

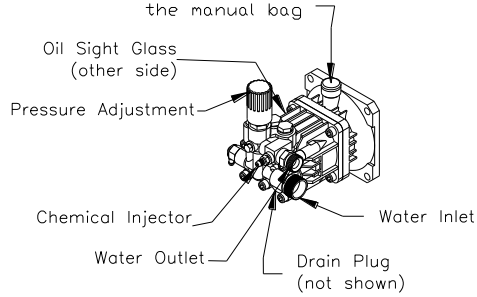
⚠ WARNING - To reduce the risk of electrocution, keep all connections dry and off the ground. Do not touch plug with wet hands.

SAVE THESE INSTRUCTIONS

Pump Component Identification

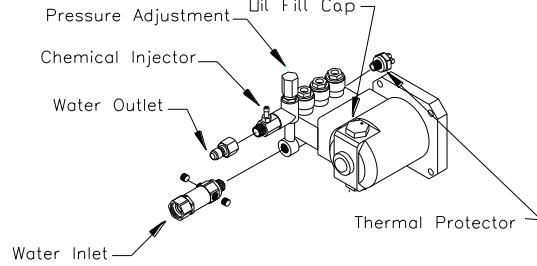
A1573001

Remove shipping cap,
install the cap from
the manual bag



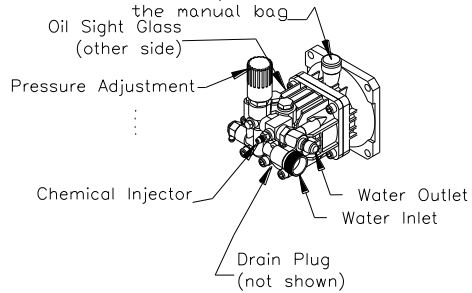
A1573011

Remove Shipping Tape
And Black Vent Plug
(if present) From
Oil Fill Cap



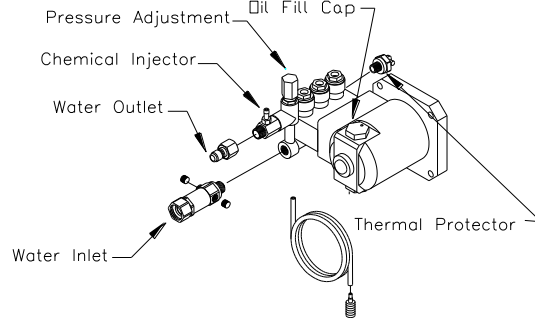
A157306

Remove shipping cap,
install the cap from
the manual bag
Oil Sight Glass
(other side)



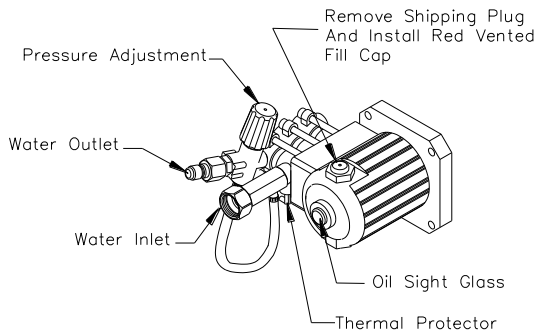
A1573021

Remove Shipping Tape
And Black Vent Plug
(if present) From
Oil Fill Cap

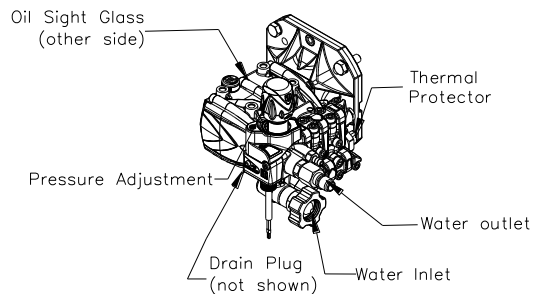


A1575581

Remove Shipping Plug
And Install Red Vented
Fill Cap



A1571101



A1571104

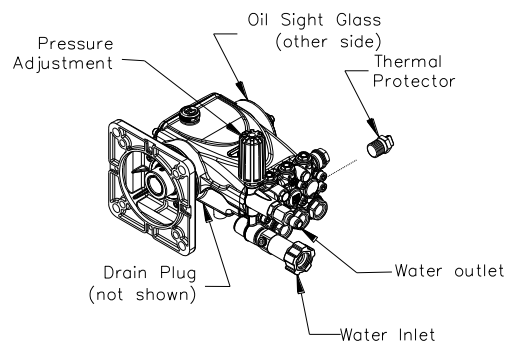


FIG05732

*Note: Discard Shipping Plug and O-ring

Operation Instructions

Water Supply

- 1.) Make sure the water supply is clean. Debris can cause excess pump wear and reduce performance.
- 2.) An insufficient water supply will damage your pump. Make sure the water supply is steady and is 20% over the rated flow of your pump. Use a stopwatch to time how long it takes to fill a 5-gallon bucket with your garden hose. The bucket must fill faster than the times listed in the table below.

Model	Time to fill a 5 gal. bucket
A1573001	167 seconds
A1573011	167 seconds
A1573021	100 seconds
A157306	100 seconds
A1575581	125 seconds
A1571101	160 seconds
A1571104	60 seconds

- 3.) The water supply garden hose must have an inside diameter of at least 5/8". If the hose is more than 100 ft. long, the diameter must be at least 3/4".
- 4.) Never use a reservoir tank as a water source. Drawing water out of a tank may cause pump cavitation and damage to your pump. This pressure washer is designed for a pressurized water source such as a city water faucet. However, the water source pressure must not exceed 115 psi (8 bar).

Always use a flexible rubber hose for your water supply. Do not use rigid piping.

START-UP INSTRUCTIONS

1. Attach garden hose.
2. Attach pressure hose.
3. Attach gun and lance.
4. Turn water supply ON.
5. Squeeze trigger to purge air from pump.
6. Insert nozzle.
7. Plug in power cord
8. Reset the GFCI button on the cord
9. Start motor.

SHUT-DOWN INSTRUCTIONS

1. Turn motor OFF.
2. Unplug the power cord.
3. Turn water supply OFF.
4. Squeeze trigger to relieve system pressure.
5. Remove garden hose.
6. Remove pressure hose.

CONNECTING TO MOTOR

See Specifications section for motor horsepower, shaft size, and bolt circle information.

WARNING



Skin puncture hazard.

High pressure fluid can inject under skin resulting in serious injury including amputation. Do not direct spray at people or animals.

-If skin injection happens, seek IMMEDIATE surgical treatment.

-Do not check for leaks with hand. Instead, use a piece of cardboard to check for leaks.

-Do not use unit if exterior hose damage is evident. Make sure all fittings are tight before starting. Relieve system pressure before servicing.

-Know how to stop engine and bleed pressures quickly. Be thoroughly familiar with the controls.

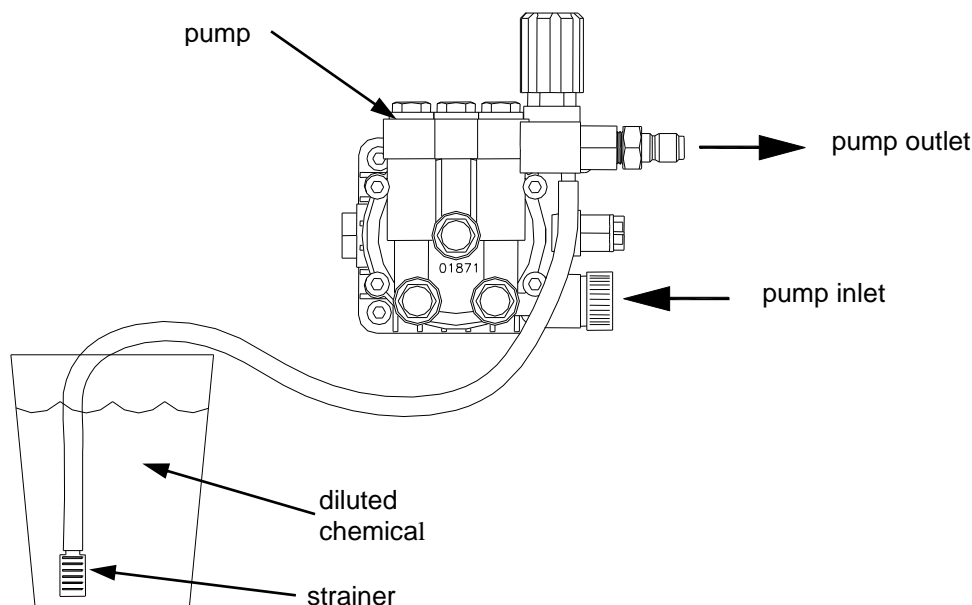
-Make sure accessories meet the unit's temperature and pressure limits.

-Stop engine and bleed pressures before leaving unit unattended.

Operation Instructions

Applying Chemicals

- 1.) Install the black nozzle when applying chemicals onto the cleaning surface.
- 2.) Start the pressure washer according to the start-up instructions.
- 3.) Submerge the chemical hose in cleaning solution. (See Pump Component Identification section for chemical injector location.)
- 4.) Squeeze the spray gun trigger. The chemical injector will draw the chemical into the water stream.
- 5.) Apply chemicals evenly onto the cleaning surface. Allow the chemicals to react with the dirt, then clean at high pressure with high pressure (green or yellow) nozzle.
- 6.) Never use more chemical than is necessary to clean the surface.
- 7.) To clean the chemical injector, draw water through the strainer until all the chemical is purged from the system.



WARNING

Risk of exposure to dangerous chemicals.

Serious injury or death can result if chemical manufacturer instructions are not followed.

- Wear protective gloves when handling and cleaning with chemicals.
- Understand all safety hazards and first aid for all chemicals being used.
- When cleaning filters, check if chemicals have been used and take any precautions that are recommended by the chemical manufacturer.
- Different chemicals may interact dangerously with each other, always follow chemical manufacturer directions before switching chemicals.
- Calculate the correct amount of chemical to mix, dispose of excess chemical per the manufacturer instructions.
- Never spray flammable liquids.



fig01846

Maintenance and Storage

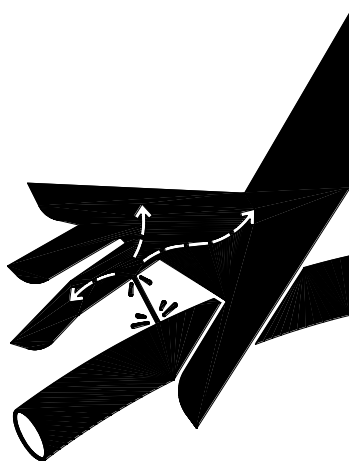
Maintenance Mode

Before performing any maintenance on the pressure washer, it must be placed in maintenance mode.

- 1.) Turn off motor and unplug cord.
- 2.) Turn off water supply.
- 3.) Squeeze trigger to relieve system pressure.

Maintenance Schedule

What to Check	When to Check	What to Do
Inlet Filter	Each Use	Visually inspect and clean inlet filter with clear water.
Pressure Hose	Each Use	Visually inspect pressure hose and hose couplings. Replace hose if any of the following is evident: hose coupling is damaged, wire mesh is exposed or damaged, hose is permanently kinked or flattened, outer hose cover is blistered or loose.
Bolts	Each Use	Tighten any loose bolts.
Pump Oil	After 1 st 50hrs, then 3mo/500hr	Change pump oil. See pump oil change instructions on next page.



⚠ WARNING

Skin injection hazard.

High pressure fluid can inject under skin resulting in serious injury including amputation.

-Make sure all fittings are tight before applying pressure. Relieve system pressure before servicing.

-Do not check for leaks with hand. Instead, use a piece of cardboard to check for leaks.

-If skin injection happens, seek immediate "Surgical Treatment".

fig01454

Maintenance and Storage

Pump Oil Change

- 1.) Place a suitable container below the pump to catch the used oil, then remove the oil fill cap and oil drain plug.
- 2.) Allow the used oil to drain completely, then reinstall the drain plug and tighten securely.
- 3.) Please dispose of used oil in a manner that is compatible with the environment. We suggest you take used oil in a sealed container to your local recycling center or service station for reclamation. Do not throw it in the trash; pour it on the ground or down the drain.
- 4.) With the pump in a level position, fill to the halfway point on the oil sight glass (see pump oil capacities below). For Comet pumps use Universal Tractor Transmission Oil or Mobil 1 15W50 synthetic oil. For Cat pumps use SAE30 non-detergent oil or Cat Pump Oil Item# 22158.

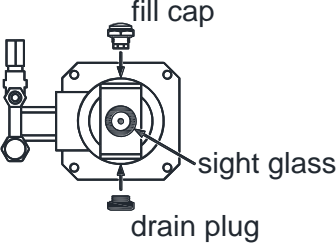
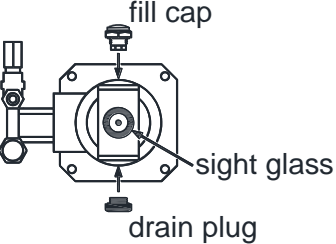
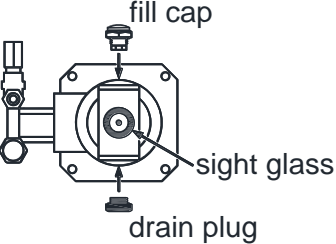
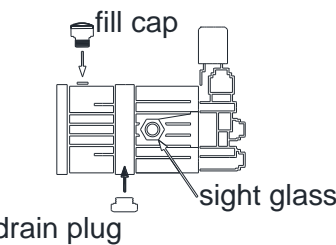
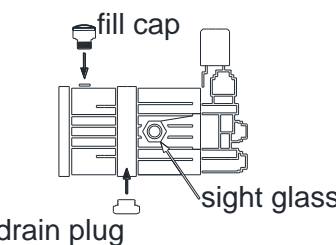
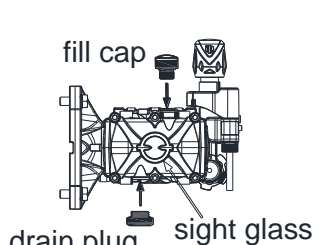
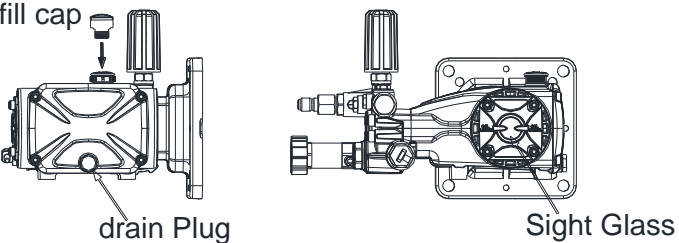
<p>A1575581</p>  <p>Oil capacity: 11.83 oz. (.35L)</p>	<p>A1573021</p>  <p>Oil capacity: 8.5 oz. (.25L)</p>	<p>A1573011</p>  <p>Oil capacity: 8.5 oz. (.25L)</p>
<p>A1573001</p>  <p>Oil capacity: 5.7oz. (.17L)</p>	<p>A157306</p>  <p>Oil capacity: 5.7oz. (.17L)</p>	<p>A1571101</p>  <p>Oil capacity: 4.7 oz. (.13 L)</p>
<p>A1571104</p>  <p>Oil capacity: 15 oz. (.44 L)</p>		

FIG05220

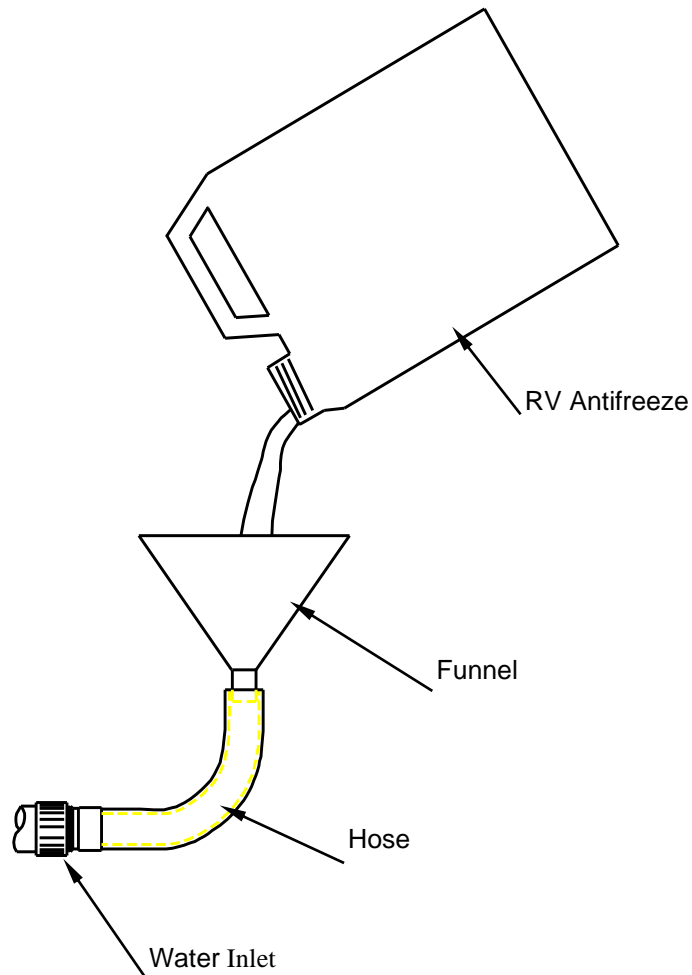
Maintenance and Storage

Winter Storage

Protect your pump, hose and gun from freezing.

Items needed: 12" piece of garden hose or equivalent, funnel and RV antifreeze (approximately 6 oz.)

- 1.) Follow the storage instructions listed above.
- 2.) Make sure the motor start switch is OFF.
- 3.) Attach the garden hose with funnel to the pump inlet (see illustration).
- 4.) Pour RV antifreeze into the funnel, run motor until antifreeze comes out the pump outlet.
- 5.) Drain all water from the high-pressure hose. Depress trigger on gun and drain all water out of gun/lance.



Troubleshooting

Problem	Solution
Motor will not start	SOLUTION: A,B
Low/Surging pressure or no water flow	SOLUTION: C,D,E,F,G,H
No chemical injection	SOLUTION: I,J,K,L
Cause	Solution
A- Tripped GFCI cord	Reset GFCI cord
B- Tripped motor relay	Reset motor
C- Insufficient water supply	See water supply section of this manual
D- Plugged pump inlet filter	See maintenance section of this manual
E- Wrong nozzle	Make sure high-pressure nozzle is being used
F- Plugged nozzle	Remove nozzle, check for blockage
G- Worn nozzle	Replace nozzle
H- Leak in pressure hose	Replace pressure hose
I- Wrong nozzle	Make sure chemical nozzle is being used
J- Back pressure from extra long discharge hose	Try shorter hose
K- Leak in chemical siphon hose	Replace hose – use hose clamps if necessary
L- Chemical strainer not submerged	Make sure strainer is completely submerged

The manufacturer reserves the right to make improvements in design and/or changes in specifications at any time without incurring any obligation to install them on units previously sold.

Any Questions, Comments, Problems or Parts Orders
Call NorthStar Product Support 1-800-270-0810

Specifications

A1573001

PSI (bar)	1700 (117)
GPM (l/min)	1.5 (5.7)
Max Water Temp	140°F (60°C)
Horsepower Required	1.5HP Electric Motor
Shaft Size	5/8" keyed
Motor Mounting Dimensions	C Face 5 – 7/8" Bolt Circle
Outlet Connection	22mm
Nozzle Size	#2.0
Weight	12 lbs (5.4kg)

A1573011

PSI (bar)	2000 (138)
GPM (l/min)	1.5 (5.7)
Max Water Temp	140°F (60°C)
Horsepower Required	2HP Electric Motor
Shaft Size	5/8" keyed
Motor Mounting Dimensions	C Face 5 – 7/8" Bolt Circle
Outlet Connection	3/8 QC
Nozzle Size	#2.0
Weight	13 lbs (5.9kg)

A1573021

PSI (bar)	2750 (190)
GPM (l/min)	2.5 (9.4)
Max Water Temp	140°F (60°C)
Horsepower Required	5HP Electric Motor
Shaft Size	3/4" keyed
Motor Mounting Dimensions	C Face 5 – 7/8" Bolt Circle
Outlet Connection	3/8 QC
Nozzle Size	#3.0
Weight	14 lbs (6.4kg)

A1575581

PSI (bar)	1500 (103)
GPM (l/min)	2.0 (7.5)
Max Water Temp	140°F (60°C)
Horsepower Required	2HP Electric Motor
Shaft Size	5/8" keyed
Motor Mounting Dimensions	C Face 5 – 7/8" Bolt Circle
Outlet Connection	3/8 QC
Nozzle Size	#3.0
Weight	16 lbs (7.3kg)

A157306

PSI (bar)	2700 (186)
GPM (l/min)	2.5 (9.4)
Max Water Temp	140°F (60°C)
Horsepower Required	5HP Electric Motor
Shaft Size	3/4" keyed
Motor Mounting Dimensions	C Face 5 – 7/8" Bolt Circle
Outlet Connection	3/8 QC
Nozzle Size	#3.0
Weight	12 lbs (5.4kg)

A1571101

PSI (bar)	1700 (117)
GPM (l/min)	1.5 (5.7)
Max Water Temp	165°F (74°C)
Horsepower Required	1.5HP Electric Motor
Shaft Size	5/8" keyed
Motor Mounting Dimensions	C Face 5 – 7/8" Bolt Circle
Outlet Connection	3/8 QC
Nozzle Size	#2.0
Weight	9.7 lbs. (4.4kg)

A1571104

PSI (bar)	2500 (172)
GPM (l/min)	4.0 (15.1)
Max Water Temp	165°F (74°C)
Horsepower Required	6.2HP Electric Motor
Shaft Size	9/8" keyed

A1571104 Cont'd

Motor Mounting Dimensions	C Face 7 – 1/4" Bolt Circle
Outlet Connection	3/8 QC
Nozzle Size	#5.5
Weight	17.4 lbs. (7.9 kg)

Parts Exploded View

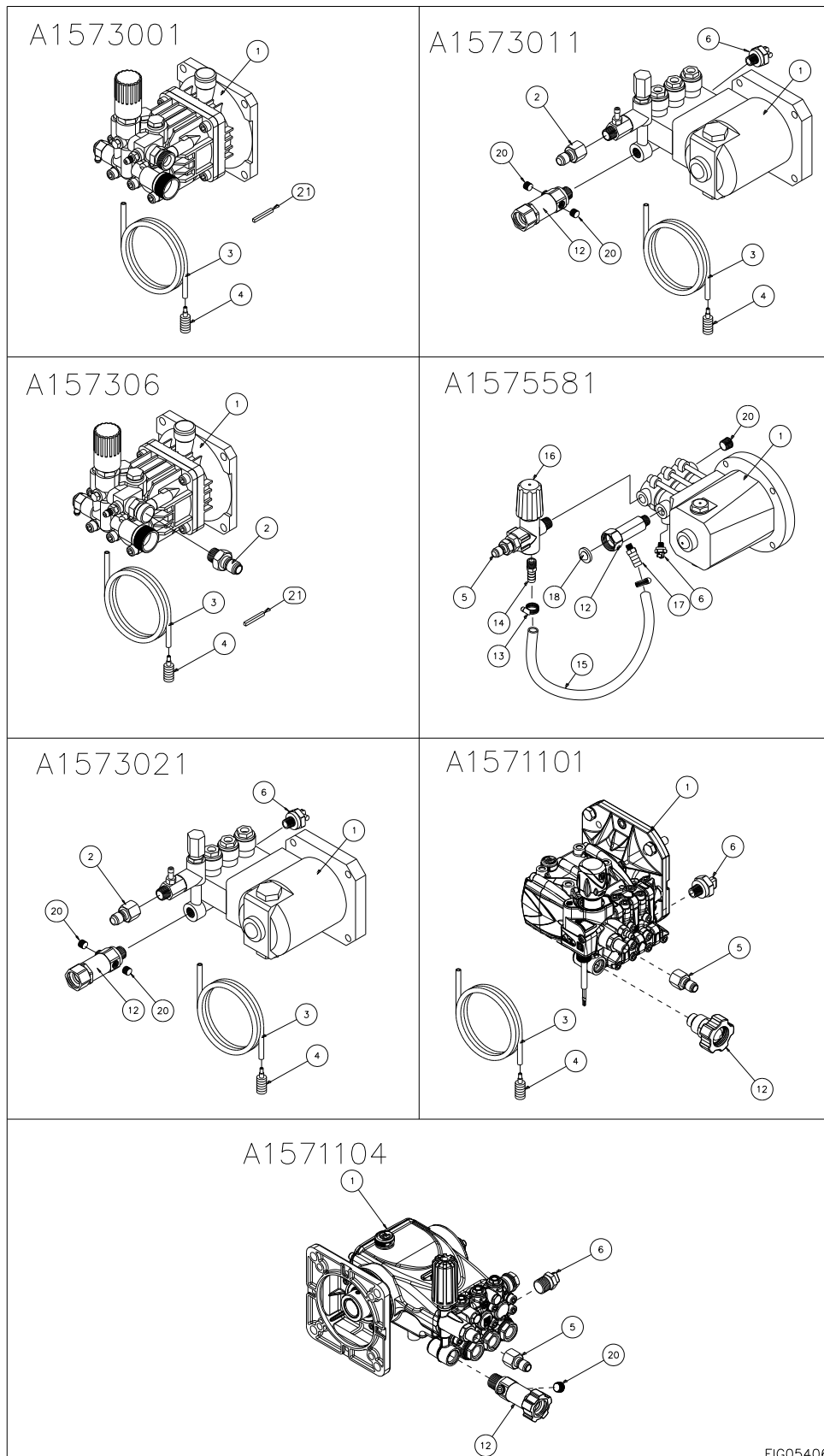
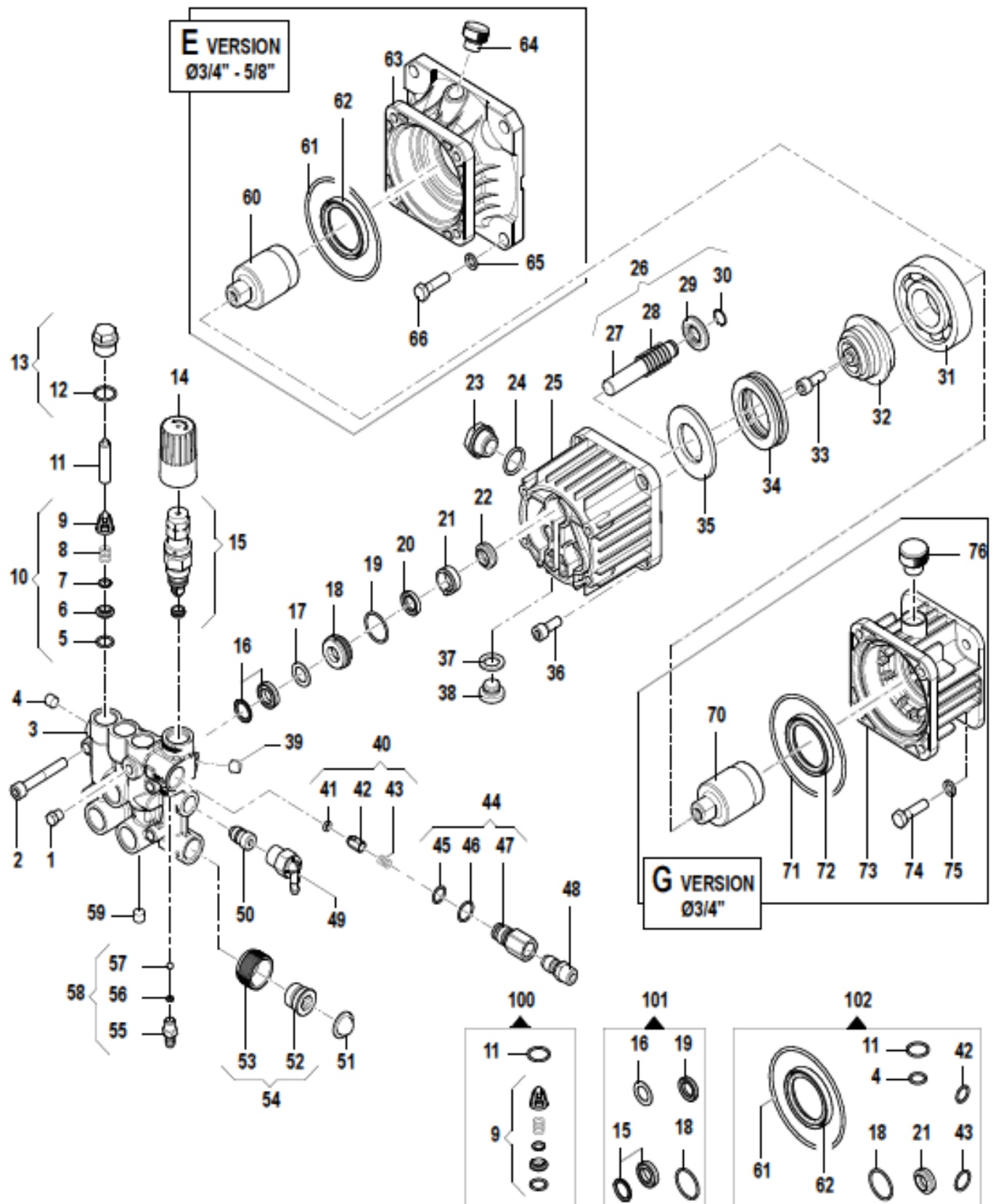


FIG05406

Parts Exploded View

Item	Part#	Description	Qty	Model
1	790693	Comet AXD 1617E GH	1	A1573001
	792420	Cat 4DX		A1573011
	789205	Cat 4DNX		A1573021
	790550	Comet AXD2527GE-NH		A157306
	35149	Cat 2SFX		A1575581
	802765	GP EVO-0		A1571101
	802760	GP NEP1812E17UL		A1571104
2	777913	3/8” QC male nipple	1	A157306
3	805557	1/4” Braided Hose – 36”	1	A1573001, 3011, 3021, 306, A1571101
4	221222	Chemical Strainer	1	A1573001, 3011, 3021, 306, A1571101
5	777915	3/8” QC Female Nipple	1	A1573011, 3021, 5581, A1571104
6	35918	Thermal Protector	1	A1573011, 3021, 5581, A1571101
	777836			A1571104
12	803642	3/8” Inlet Filter Fitting	1	A1573011, 3021
	30484			A1575581
	803134	1/2” Inlet Filter Fitting		A1571101
	800986			A1571104
13	777119	1/2” Hose Clamp	2	A1575581
14	777839	3/8” Connection Fitting	1	A1575581
15	805648	1/2” Hose – 12”	1	A1575581
16	788711	Unloader	1	A1575581
17	777840	1/4” x 1/2” Hose Barb	1	A1575581
18	4027	Inlet Filter	1	A1575581
19	777837	3/8” Hex Plug	1	A1575581
20	777838	1/4” Hex Plug	2	A1573011, A1573021, A1571104
21	82141	3/16 Key, 1-1/2”	1	A157306, A1573001

Pump Exploded Views	
---------------------	--

A1573001

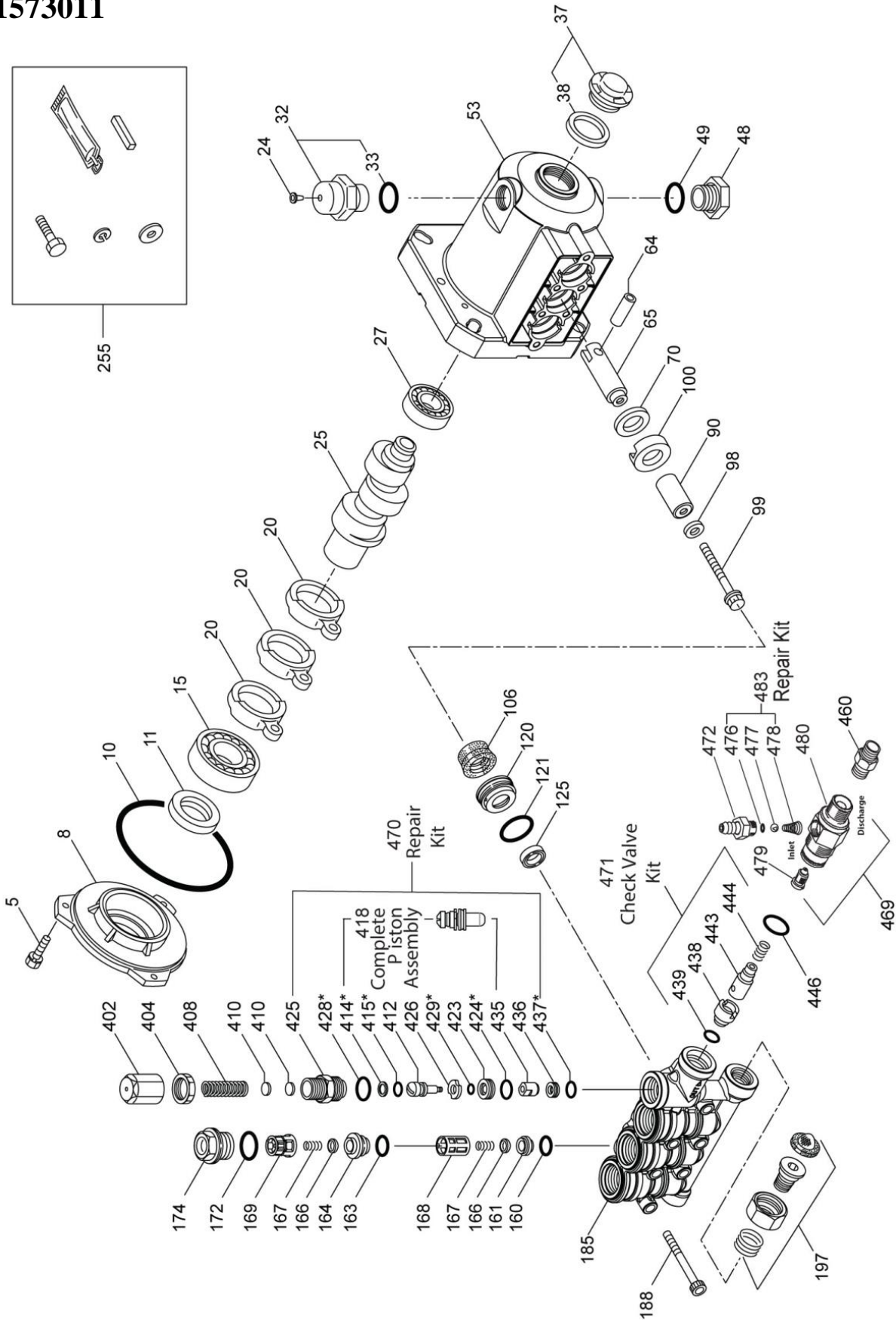
Pump Exploded Views

Ref #	Part #	Description	Qty
1	CO3202001800	CAP	1
2	CO3609001400	SCREW, M8 X 55	4
3	CO3218032700	MANIFOLD	1
4	CO3202001800	CAP	1
5	CO1210004900	O-RING,OIL PLUG - WOBBLE PUMP	6
6	SEE PART # 10	VALVE SEAT	6
7	CO3604002800	SUCTION/DEL. VALVE	6
8	CO1802019200	SPRING, AXD	6
9	CO1205003300	VALVE CAGE, AXD	6
10	CO1220004500	VALVE - AXD PUMP	6
11	CO0601027300	AXD SPACER	2
12	CO1210015100	O-RING, AXD3020	6
13	CO3202031100	VALVE CAP & O-RING	6
14	CO1817006400	HANDLE	1
15	CO1215058500	REG.VALVE KIT & SEAT	1
16	CO1241005900	PACKING - GXD1617	3
17	CO0009036900	RING	3
18	CO0009021900	RING(RETAINER) - WOBBLE PUMP	3
19	CO1210035600	O-RING,SEAL CONTAINER - WOBBLE	3
20	CO1241005700	BACK PACKING	3
21	CO0601030800	OIL SEAL SPACER	3
22	CO0019005800	SEALING RING(OIL) - WOBBLE PLA	3
23	CO3201002700	OIL SIGHT GLASS	1
24	CO1210004800	O-RING, 2.62 X 20.24MM	1
25	NOT AVAILABLE	PUMP CRANKCASE	1
26	CO2409015600	PISTON KIT	3
27	CO2409008900	PISTON - AXD3020G	3
28	CO1802015300	SPRING, AXD	3
29	CO0009022100	RING FOR AXD	3
30	CO0009022000	14MM RING FOR AXD	3
31	CO0438007600	BALL BEARING - AXD	1
32	CO0001054800	ECCENTRIC SHAFT - AXD	1
33	CO3609000500	SCREW, M8 X 20 - AXD	1
34	CO0436001700	BEARING	1
35	CO2816008800	THRUST BEARING	1
36	CO3609002800	SCREW M8 X 22	4

Ref #	Part #	Description	Qty
39	CO3200001700	PORT PLUG, AXD COMET PUMP	1
40	CO2409009100	PISTON CHECK VALVE KIT,AXD UNL	1
41	CO1210046000	O-RING	1
42	CO2409008600	CHECK VALVE	1
43	CO1802019700	SPRING	1
44	CO3410031900	INJECTOR BODY KIT	1
45	CO1210004900	O-RING,OIL PLUG - WOBBLE PUMP	1
46	CO1210004000	O-RING, AXD	1
47	CO3410031100	INJECTOR BODY	1
48	CO2803043700	OUTLET FITTING, QUICK CONN.-WO	1
49	CO1215035400	THERMOVALVE	1
51	CO8102045000	FILTER WASHER	1
52	CO1223010800	GARDEN HOSE NUT	1
53	SEE PART # 54	SPECIAL COUPLING - NLA	1
54	CO2800051100	GARDEN HOSE TAIL W/WING NUT	1
55	SEE PART # 58	CHEM. COUPLING	1
56	CO3003002400	BALL FOR CHEMICAL INJECTOR	1
57	CO1802018000	SPRING FOR CHEMICAL INJECTOR	1
58	CO2803043500	CHEMICAL INJECTOR KIT	1
59	CO3200001700	PORT PLUG, AXD COMET PUMP	1
60	CO0001044200	DRIVESHAFT	1
61	CO1210042900	O-RING FOR AXD	1
62	CO0019003400	SEALING RING - AXD PUMP	1
63	NOT AVAILABLE	SUPPORT	1
64	CO3200007100	OIL PLUG - WOBBLE PUMP	1
65	CO2811000400	WASHER - 268197	4
66	CO3607011900	SCREW - 268197	4
100	CO5025001400	VALVE KIT - AXD3020G	1
101	CO5019007700	SEAL KIT - AXD3020G	1
102	CO5019007900	SEAL KIT, AXD	1

Pump Exploded Views

A1573011



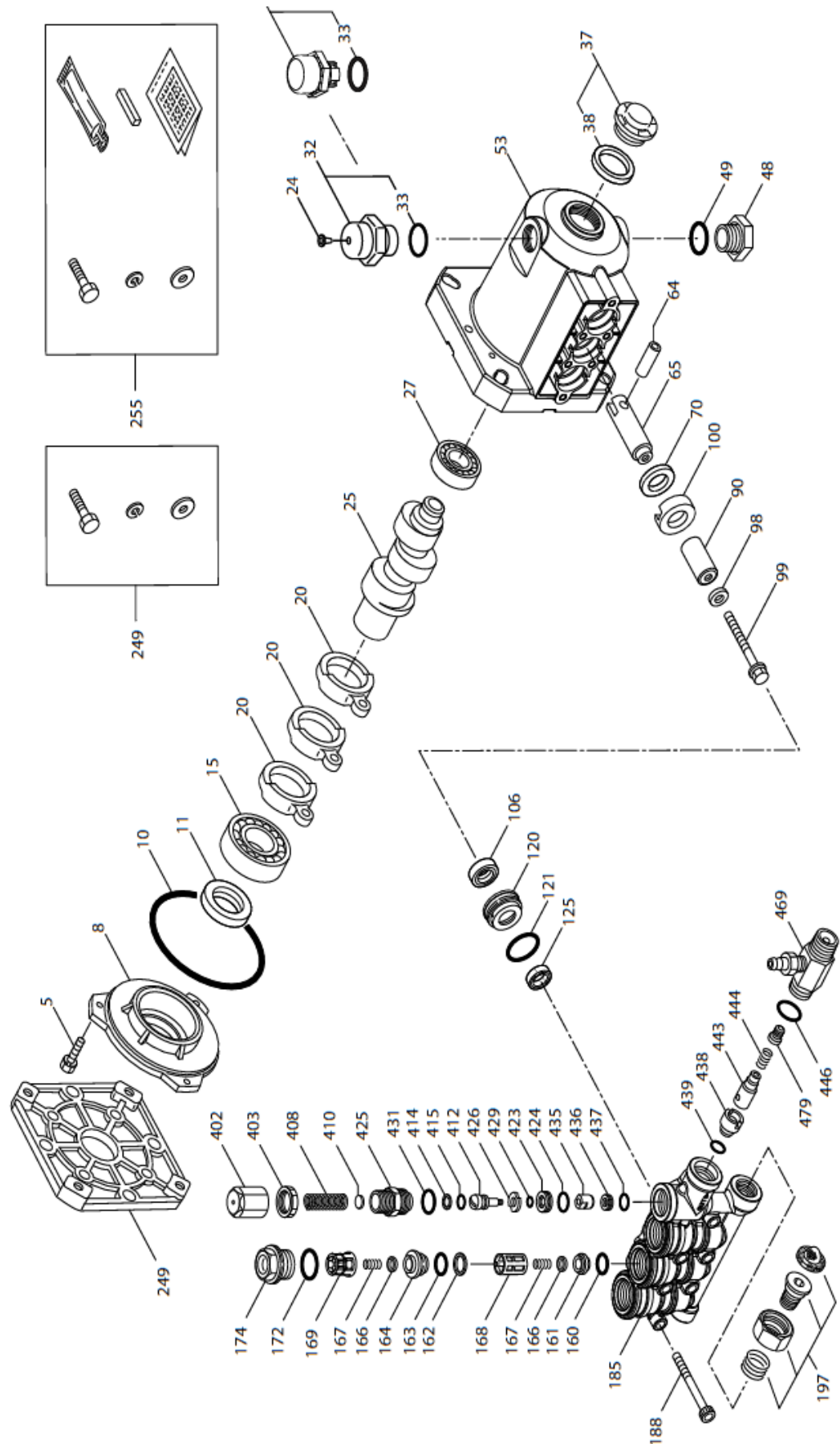
Pump Exploded Views

Ref#	P/N	DESCRIPTION	QTY
5	<i>Not Available</i>	Screw	3
8	CA547153	Bearing Cover	1
10	CA14041	O-Ring, Bearing Cover	1
11	CA55337	Oil Seal	1
15	CA14488	Inner Ball Bearing	1
20	CA547048	Connecting Rod	3
24	<i>Not Available</i>	Oil Plug Cap	1
25	<i>Not Available</i>	Crankshaft	1
27	CA15710	Ball Bearing	1
32	CA547961	Cap	1
33	CA14179	O-ring for Oil Filter Cap	1
37	CA92241	Gauge, Bubble Oil w/Gasket	1
38	CA44428	Gasket, Flat Flex Oil Gauge	1
48	CA44842	Drain Plug	1
49	CA14179	O-Ring for Drain Plug	1
53	<i>Not Available</i>	Crankcase	1
64	CA46229	Crosshead Pin	3
65	CA132190	Plunger Rod	3
70	CA47215	Oil Seal	3
90	CA542403	Plunger	3
98	CA46730	Washer	3
99	CA542405	Retainer, Plunger	3
100	CA46233	Retainer, Seal	3
106	CA48222	Seal	3
120	CA547357	Seal Case	3
121	CA13976	O-Ring for Seal Case	3
125	CA46240	Seal	3
160	CA13965	O-Ring, Inlet	3
161	CA545177	Seat, Inlet	3
163	CA19285	O-Ring	3
164	CA545178	Seat, Discharge	3
166	CA46764	Valve	6
167	CA46865	Spring	6
168	CA543988	Retainer, Spring, Inlet	3
169	CA49764	Retainer, Spring, Discharge	3
172	CA142807	O-Ring for Plug	3
174	CA547104	Plug, Valve w/o-ring	3
185	<i>Not Available</i>	Head, Manifold w/Unloader Body	1
188	<i>Not Available</i>	Screw	6

Ref#	P/N	DESCRIPTION	QTY
197	CA941516	Inlet Fitting Assembly	1
255	CA30516	Bolt Mount Assembly	1
401	CA32088	Handle Adjustable (Not Shown)	1
402	CA46570	Adjusting Cap	1
404	CA45070	Lock Nut	1
408	CA33394	Pressure Spring	1
410	CA549352	Spring Retainer	1
412	CA46251	Piston Stem	1
414	CA28338	Back Up Ring	1
415	CA22056	O-Ring, Piston Stem	1
418	<i>Not Available</i>	Piston Assy (Included in # 470)	1
423	CA46249	Retainer Valve	1
424	CA13966	O-Ring, Valve Retainer (Outer)	1
425	CA46248	Piston Retainer	1
426	CA46250	Washer	1
428	CA26133	O-Ring	1
429	CA17399	O-Ring, Valve Retainer	1
435	CA548193	Valve	1
436	CA46253	Seat	1
437	CA13963	O-Ring, Seat	1
438	CA46254	Seat, Check Valve	1
439	CA13963	O-Ring, Check Valve Seat	1
443	CA541060	Valve, Check	1
444	CA45924	Spring	1
446	CA26133	O-Ring	1
460	CA107681	Discharge Fitting	1
469	CA7231	Chemical Fixed Injector	1
470	CA76031	Unloader Repair Kit Inclds: 418, 428, 436, 437	1
471	CA76146	Check Valve Kit Inclds: 438, 439, 443, 444, 446	1
472	CA46630	Barb	1
476	<i>Not Available</i>	Barb O-Ring	1
477	<i>Not Available</i>	Ball	1
478	<i>Not Available</i>	Spring	1
479	<i>Not Available</i>	Orifice	1
480	<i>Not Available</i>	Body	1
483	CA76176	Repair Kit	1
Kit #1	CA33053	Seal Kit Inclds: 98, 106, 121, 125	1
Kit #2	CA76978	Valve Kit Inclds: 160, 161, 162, 163, 164, 166, 167, 168, 169, 172	1
*	CA76754	O-ring Kit Inclds: 414, 415, 424, 428, 429, 437	1

Pump Exploded Views

A1573021



Pump Exploded Views

Ref#	P/N	DESCRIPTION	QTY
5	<i>Not Available</i>	Screw	3
8	CA547153	Bearing Cover	1
10	CA14041	O-Ring, Bearing Cover	1
11	CA55337	Oil Seal	1
15	CA14488	Inner Ball Bearing	1
20	CA547048	Connecting Rod	3
24	<i>Not Available</i>	Oil Plug Cap	1
25	CA549446	Crankshaft	1
27	CA56084	Ball Bearing	1
32	CA547961	Cap	1
33	CA14179	O-ring for Oil Filter Cap	1
37	CA92241	Gauge, Bubble Oil w/Gasket	1
38	CA44428	Gasket, Flat Flex Oil Gauge	1
48	CA44842	Drain Plug	1
49	CA14179	O-Ring for Drain Plug	1
53	<i>Not Available</i>	Crankcase	1
64	CA46229	Crosshead Pin	3
65	CA542402	Plunger Rod	3
70	CA47215	Oil Seal	3
90	CA547091	Plunger	3
98	CA46730	Washer	3
99	CA542405	Retainer, Plunger	3
100	CA46233	Retainer, Seal	3

One Kit Will Complete One Pump

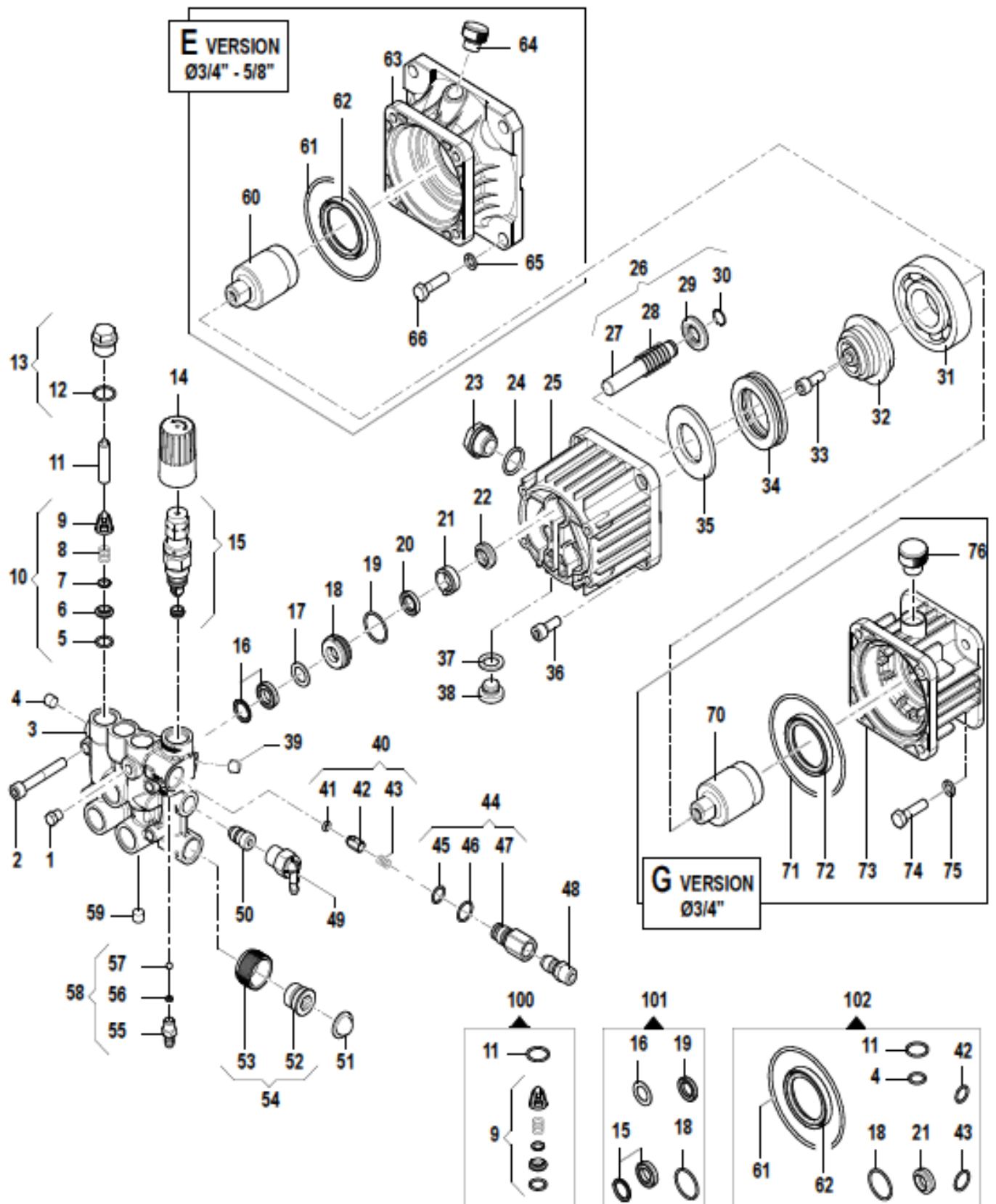
Ref#	P/N	DESCRIPTION	QTY
106	Kit #1	Seal	3
120	<i>Not Available</i>	Seal Case	3
121	CA13976	O-Ring for Seal Case	3
125	Kit #1	Seal	3
160	CA17428	O-Ring, Inlet	3
161	CA547077	Seat, Inlet	3
162	CA48361	Back-up Ring	3
163	CA43358	O-Ring	3
164	CA547076	Seat, Discharge	3
166	CA547098	Valve	6
167	CA46865	Spring	6
168	CA543988	Retainer, Spring, Inlet	3
169	Kit #2	Retainer, Spring, Discharge	3
172	CA142807	O-Ring for Plug	3
174	CA547104	Plug, Valve w/o-ring	3
185	<i>Not Available</i>	Head, Manifold w/Unloader Body	1
188	<i>Not Available</i>	Screw	6
197	CA941516	Inlet Fitting Assembly	1
249	CA30520	Adapter Mount Assembly	1
255	CA30516	Bolt Mount Assembly	1
403	CA45070	Lock Nut	1
469	CA7332	Chemical Fixed Injector	1

KITS

Kit#1	CA76975	Seal Kit: Incls: 98, 106, 121, 125	1
Kit#2	CA76976	Valve Kit: Incls: 160, 161, 162, 163, 164, 166, 167, 168, 169, 172	1

Pump Exploded Views

A157306



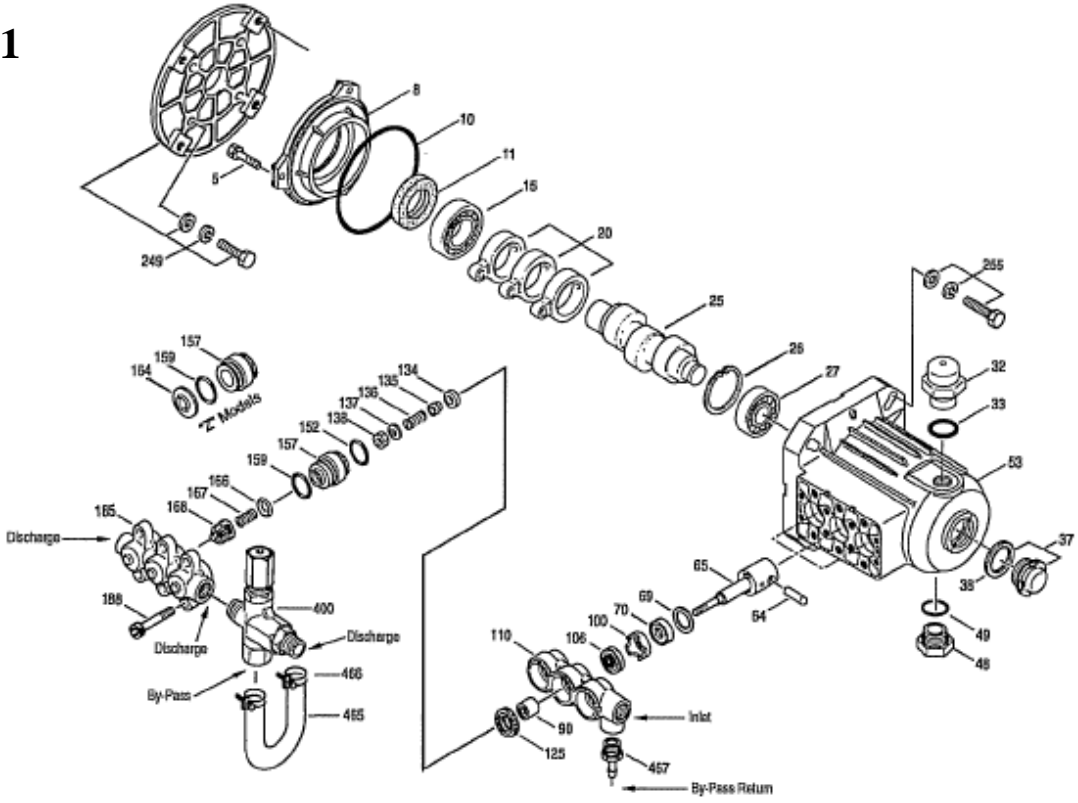
Pump Exploded Views

Ref #	Part #	Description	Qty
1	CO3202001800	CAP	1
2	CO3609001400	SCREW, M8 X 55	4
3	NOT AVAILABLE	MANIFOLD	1
4	CO3202001800	CAP	1
5	CO1210004900	O-RING,OIL PLUG - WOBBLE PUMP	6
6	SEE PART # 10	VALVE SEAT	6
7	CO3604002800	SUCTION/DEL. VALVE	6
8	CO1802019200	SPRING, AXD	6
9	CO1205003300	VALVE CAGE, AXD	6
10	CO1220004500	VALVE - AXD PUMP	6
11	CO0601027300	AXD SPACER	2
12	CO1210015100	O-RING, AXD3020	6
13	CO3202031100	VALVE CAP & O-RING	6
14	CO1817006400	HANDLE	1
15	CO1215058600	REG.VALVE KIT & SEAT	1
16	CO1241005900	PACKING - GXD1617	3
17	CO0009036900	RING	3
18	CO0009021900	RING(RETAINER) - WOBBLE PUMP	3
19	CO1210035600	O-RING,SEAL CONTAINER - WOBBLE	3
20	CO1241005700	BACK PACKING	3
21	CO0601030800	OIL SEAL SPACER	3
22	CO0019005800	SEALING RING(OIL) - WOBBLE PLA	3
23	CO3201002700	OIL SIGHT GLASS	1
24	CO1210004800	O-RING, 2.62 X 20.24MM	1
25	NOT AVAILABLE	PUMP CRANKCASE	1
26	CO2409015600	PISTON KIT	3
27	CO2409008900	PISTON - AXD3020G	3
28	CO1802015300	SPRING, AXD	3
29	CO0009022100	RING FOR AXD	3
30	CO0009022000	14MM RING FOR AXD	3
31	CO0438007600	BALL BEARING - AXD	1
32	CO0001041700	ECCENTRIC SHAFT - AXD	1
33	CO3609000500	SCREW, M8 X 20 - AXD	1
34	CO0436001700	BEARING	1
35	CO2816008800	THRUST BEARING	1
36	CO3609002800	SCREW M8 X 22	4
37	CO1209011700	GASKET	1
38	CO3200009600	PLUG 1/4"	1

Ref #	Part #	Description	Qty
39	CO3200001700	PORT PLUG, AXD COMET PUMP	1
40	CO2409009100	PISTON CHECK VALVE KIT,AXD UNL	1
41	CO1210046000	O-RING	1
42	CO2409008600	CHECK VALVE	1
43	CO1802019700	SPRING	1
44	CO3410034800	INJECTOR BODY KIT	1
45	CO1210004900	O-RING,OIL PLUG - WOBBLE PUMP	1
46	CO1210004000	O-RING, AXD	1
47	CO3410032900	INJECTOR BODY	1
48	CO2803043700	OUTLET FITTING, QUICK CONN.- WO	1
49	CO1215035400	THERMOVALVE	1
50	CO0608003000	KIT EASY START	1
51	CO8102045000	FILTER WASHER	1
52	CO1223010800	GARDEN HOSE NUT	1
53	SEE PART # 54	SPECIAL COUPLING - NLA	1
54	CO2800051100	GARDEN HOSE TAIL W/WING NUT	1
55	SEE PART # 58	CHEM. COUPLING	1
56	CO3003002400	BALL FOR CHEMICAL INJECTOR	1
57	CO1802018000	SPRING FOR CHEMICAL INJECTOR	1
58	CO2803043500	CHEMICAL INJECTOR KIT	1
59	CO3200001700	PORT PLUG, AXD COMET PUMP	1
60	CO0001039500	DRIVESHAFT	1
61	CO1210042900	O-RING FOR AXD	1
62	CO0019003400	SEALING RING - AXD PUMP	1
63	NOT AVAILABLE	SUPPORT	1
64	CO3200007100	OIL PLUG - WOBBLE PUMP	1
65	CO2811000400	WASHER - 268197	4
66	CO3607011900	SCREW - 268197	4
100	CO5025001400	VALVE KIT - AXD3020G	1
101	CO5019007700	SEAL KIT - AXD3020G	1
102	CO5019007900	SEAL KIT, AXD	1

Pump Exploded Views	
---------------------	--

A1575581



PARTS LIST

	PIN	MATL	DESCRIPTION	MODEL USED	QTY	ITEM	PIN	MATL	DESCRIPTION	MODEL USED	QTY
5	547161	STCP	Screw, HH (M6x14) [3/03]	All Models	3	152	25089	NBR	O-Ring, Adapter - 80D	All Models	3
8	547153	AL	Cover, Bearing, Inner [3/03]	All Models	1		11377	FPM	O-Ring, Adapter - 80D	All Models	3
10	14041	NBR	O-Ring, Bearing Cover-70D [3/03]	All Models	1	157	45859	BB	Adapter, Discharge, Seal	All Models	3
11	55337	NBR	Seal, Oil - 70D [3/03]	All Models	1		811353	BB	Adapter, Discharge, Seal w/O-Rings	2SFX29ELS	3
15	14488	STL	Bearing, Ball, Inner	All Models	1		44878	BB	Spacer, Discharge, Valve	2SFX25GZ, 30GZ	3
20	547046	TNM	Rod, Connecting	All Models	3	159	25089	NBR	O-Ring, Adapter - 80D	All Models	3
25	46109	FCM	Crankshaft, 3450 RPM, 5/8", 3.1mm	2SFX20ES	1		11377	FPM	O-Ring, Adapter - 80D	All Models	3
	44529	FCM	Crankshaft, 3450 RPM, 5/8", 3.35mm	2SFX22ES	1	164	44881	S	Seat	2SFX25GZ, 30GZ	3
	44933	FCM	Crankshaft, 3450 RPM, 3/4", 3.35mm	2SFX22GS	1	166	43723	S	Valve	All Models	3
	45844	FCM	Crankshaft, 3450 RPM, 5/8", 3.8mm	2SFX25ES	1	167	541062	S	Spring	All Models	3
	542967	FCM	Crankshaft, 3450 RPM, 3/4", 4.3mm	2SFX25GZ	1	168	44555	PVDF	Retainer, Spring	All Models	3
	45428	FCM	Crankshaft, 1725 RPM, 5/8", 8.5mm	2SFX29ELS	1	185	44879	BB	Manifold, Discharge	All Models	1
	44931	FCM	Crankshaft, 3450 RPM, 5/8", 4.5mm	2SFX30ES	1	188	87859	STZP	Screw, HSH (M8x75)	All Models	6
	546334	FCM	Crankshaft, 3450 RPM, 3/4", 4.8mm [12/01]	2SFX30GS,GZ	1	249	30988	—	Assy, Adapter Mount, Gas	All Gas Models	1
	48017	FCM	Crankshaft, 3450 RPM, 3/4", 5.6mm	2SFX35GS	1		15845	STZP	Lockwasher, Split (M8)		4
26	12385	STL	Ring, Retaining	All Models	1		44843	STZP	Screw, HH (5/16-24)		4
27	15710	STL	Bearing, Ball, Outer	All Models	1		547035	AL	Flange, Adapter		1
32	547961	RTP	Cap, Oil Filler [10/4]	All Models	1		12489	STZP	Washer, Flat (M8)		4
33	14179	NBR	O-Ring, Oil Filler Cap - 70D	All Models	1	255	30517	STZP	Assy, Bolt Mount	All Models	1
37	92241	—	Gauge, Oil, Bubble w/Gasket	All Models	1		30890	STZP	Washer, Flat (3/8")		4
38	44428	NBR	Gasket, Oil Gauge - 80D	All Models	1		30921	STZP	Lockwasher, Split (3/8")		4
48	44842	NY	Plug, Drain (1/2" NPT)	All Models	1		34100	STZP	Screw, HH (3/8"-16x1-3/8")		4
49	14179	NBR	O-Ring, Drain Plug - 70D	All Models	1		8106	—	Lubricant, Anti-Seize		1
53	547285	AL	Crankcase [3/03]	All Models	1		30050	STL	Key (3/16x3/16x1-1/4" HD)		1
64	18948	CM	Pin, Crosshead	All Models	3	285	80228	STL	Screw (M8-1.25x80) (Motor Removal)	All Models	2
65	540073	SZZ	Rod, Plunger, Unchromed	2SFX20,22,25,30,35	3	300	34053	NBR	Kit, Seal (Incls: 106,125,152,159)	All Models	1
	540089	SZZ	Rod, Plunger, Unchromed	2SFX29ELS	3		33953	HT	Kit, Seal, Hi-Temp	All Models	1
	542958	SHS	Rod, Plunger	2SFX25GZ,30GZ	3				(Incls: 106,125,134,152,159)		
69	20017	STZP	Washer (M24)	All Models	3		33453	FPM	Kit, Seal (Incls: 106,125,152,159)	All Models	1
70	25461	NBR	Seal, Oil	All Models	3	310	34056	NBR	Kit, Valve	All except 29ELS, GZ	1
90	45847	CC	Plunger (M18x14)	All Models	3				(Incls: 152,157,159,166,167,168)		
	45429	CC	Plunger (M18x16)	2SFX29ELS	3		34052	NBR	Kit, Valve	2SFX25GZ, 30GZ	1
100	44889	PVDF	Retainer, Seal	All Models	3				(Incls: 152,159,164,166,167,168)		
108	+ 44876	NBR	Seal, LPS w/S-Spg	All Models	3		31642	NBR	Kit, Valve (Incls: 157,166,167,168)	2SFX29ELS	1
	545192	FPM	Seal, LPS w/S-Spg	All Models	3	311	34668	NBR	Kit, Inlet Valve (Incls: 134-137,152,159)	All Models	1
110	44874	BB	Manifold, Inlet	All Models	1	352	44050	STZP	Gauge, Oil, Removal Tool	All Models	1
125	43245	SNG	Seal, HPS w/S	All Models	3	400	750053	BB	Unloader, Regulating	Std., 2SFX Models	1
	46852	HT	Seal, HPS, Hi-Temp	All Models except GZ	3	—	7620	BB	Unloader, Regulating	2SFX25GZ, 30GZ	1
134	45854	S	Valve, Inlet	All Models	3	467	45888	BB	Barb, Pump Inlet (1/4" Hose x 1/4" NPT)	All Models	1
	33873	NY	Valve, Inlet, Hi-Temp	All Models	3	—	34455	—	Assembly, Pulsator	All Models	1
135	44871	S	Spacer	All Models	3	—	6665.8	—	Service Video		1
136	44872	S	Spring, Inlet	All Models	3	—	6107	—	Oil, Bottle (21 czi ISO 68 Multi-Viscosity Hydraulic)	All Models	1
137	88575	S	Washer, Conical (M6)	All Models	3				(Fix to specified crankcase capacity prior to start-up)		
138	81240	SS	Nut, Hex (M8)	All Models	3						

Italics are optional items. [] Date of latest production change. See Tech Bulletins 002, 024, 036, 043, 055, 064, 065, 070, 073, 074, 083, 91 and 92 for additional information.

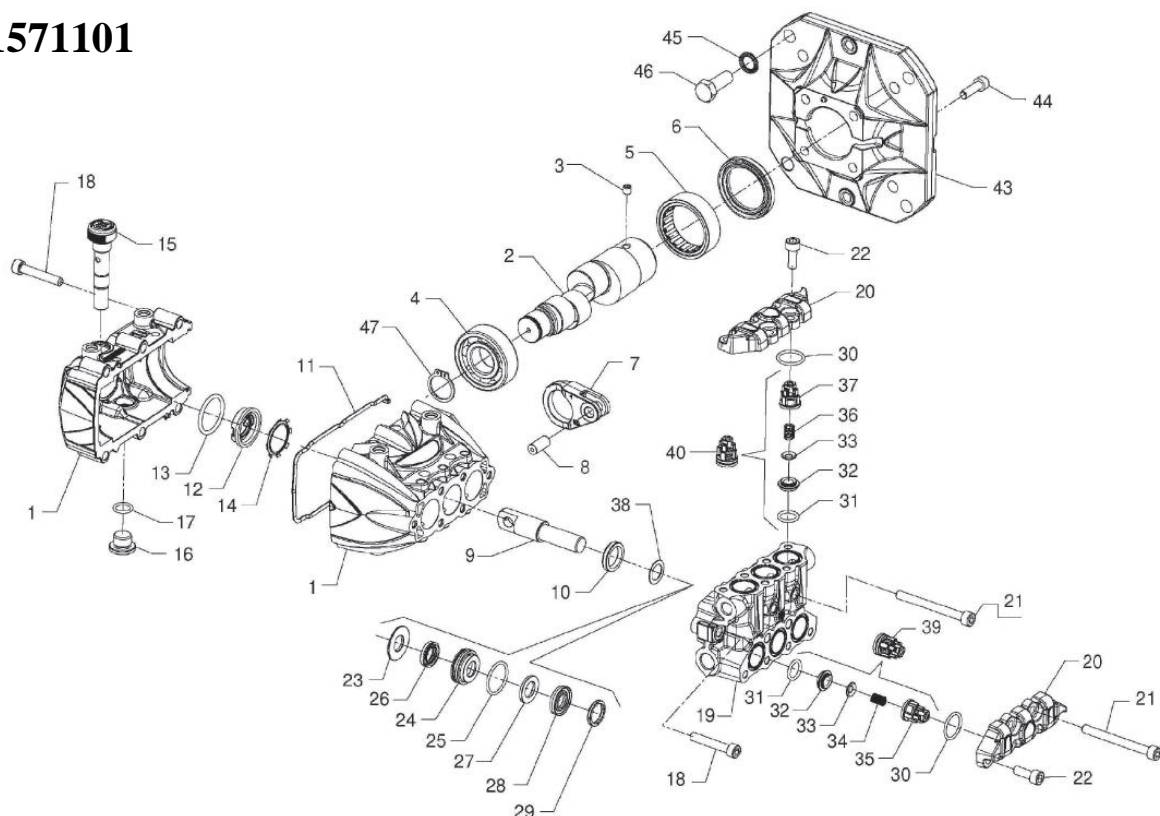
Effective with 1/90 Mfg. date 45953, 14036, 44861, 92519 have been replaced with new one piece crankcase. †Production parts are different than service parts.

Note: Discard Key which may come standard with most motors and engines and use only the key included in this kit

MATERIAL CODES (Not Part of Part Number): AL=Aluminum BB=Brass CC=Ceramic CM=Chrome-moly FCM=Forged Chrome-moly FPM=Fluorocarbon
HT=H-Temp (EPDM Alternative) NBR=Medium Nitrile (Buna-N) NY=Nylon PVDF=Polyvinylidene Fluoride RTP=Reinforced Composite SS=304SS SHS=304SS/High Strength
SNG=Special Blend (Buna) SS=316SS STL=Steel STCP=Steel Chrome-Plated STZP=Steel/Zinc Plated SZZ=304SS/Zamak TNM=Special High Strength

Pump Exploded Views

A1571101

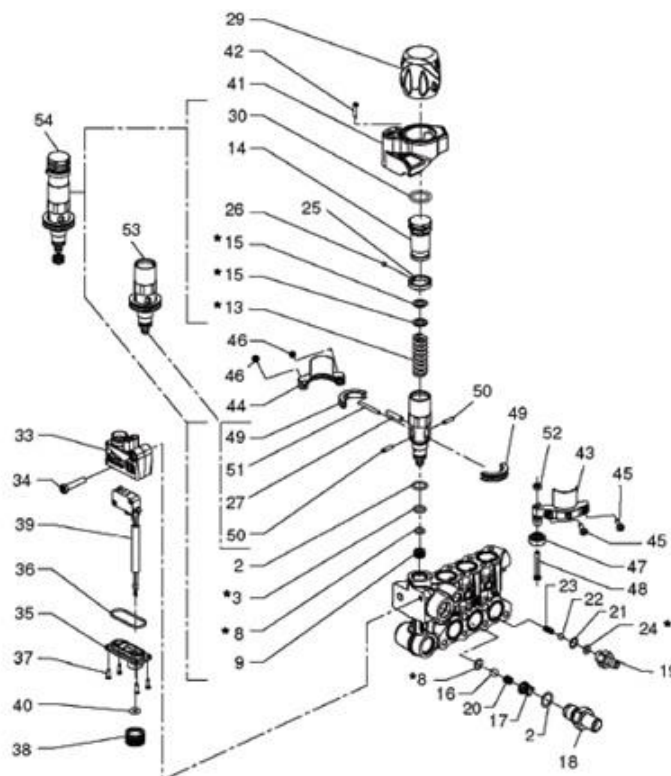


Ref#	P/N	DESCRIPTION	QTY
1	Not Available	Crankcase	4
2	Not Available	Crankshaft (EM12048EUIITS)	1
3	GP 99179000	Screw, M6x06	1
4	GP91822100	Ball Bearing	1
5	GP91846000	Roller Bushing	1
6	GP90166000	Radial Ring, Ø35.0x47.0x6.0	1
7	GP83030022	Connecting Rod	3
8	GP97730500	Pin, Ø8.0x17.0	3
9	GP83040101	Plunger Assy., Ø12	3
10	GP90158000	Radial Ring, Ø6.0x22.0x4.0	3
11	GP83210747	Gasket, Crankcase	1
12	GP53210851	Oil Level Sight Glass	1
13	GP90385900	O-ring, Ø25.07x2.62	1
14	GP90067100	Stop Ring	1
15	GP98204900	Oil Dipstick	1
16	GP98204150	Screw, G 1/4"x9	1
17	GP701013	O-ring, Ø 10.82x1.78	1
18	GP99192600	Screw, M6x35	8
19	Not Available	Manifold, Ø12	1
20	GP83210013	Valve Cover	2
21	GP99199000	Screw, M6x60	4
22	GP99185400	Screw, M6x16	10
23	GP83210370	Seal Ring, Ø 12	3
24	GP83210270	Gasket Support, Ø 12	3

Ref#	P/N	DESCRIPTION	QTY
25	GP90360000	O-ring, Ø 21.95x1.78	3
26	GP90258950	Seal Ring, Ø 12.0x18.5x4.5	3
27	GP90507080	Anti-extrusion Ring	3
28	GP90258900	Seal Ring, Ø 2.0x21.0x4.2	3
29	GP83100051	Head Ring, Ø 12	3
30	GP90359500	O-ring, Ø 17.17x1.78	6
31	GP90367400	O-ring, Ø 12.00x2.00	6
32	GP36211366	Inlet Valve Seat	6
33	GP36211276	Spherical Inlet Valve	3
34	GP94732600	Spring, Inlet, 6.0x12.0	3
35	GP36211951	Valve Guide, Inlet	3
36	GP94733300	Spring, Outlet, 6.7x10.8	3
37	GP36211151	Outlet Valve Guide	3
38	GP83210851	Ring	3
39	GP36722401	Inlet Valve Assembly	3
40	GP36719301	Outlet Valve Assembly	3
41	GP83210113	Valve Cover, G1/8 opt.	1
42	GP98196800	Plug, G1/8 opt.	1
43	GP10098422	Flange, Electric, 56C	1
44	GP99188400	Screw M6x20	4
45	GP96710400	Washer Ø 10.5x16.0x1.0	4
46	GP99334500	Screw, 3/8"-16x1"	4
47	GP90060500	Anti-extrusion Ring	1

Pump Exploded Views

A1571101 (continued)



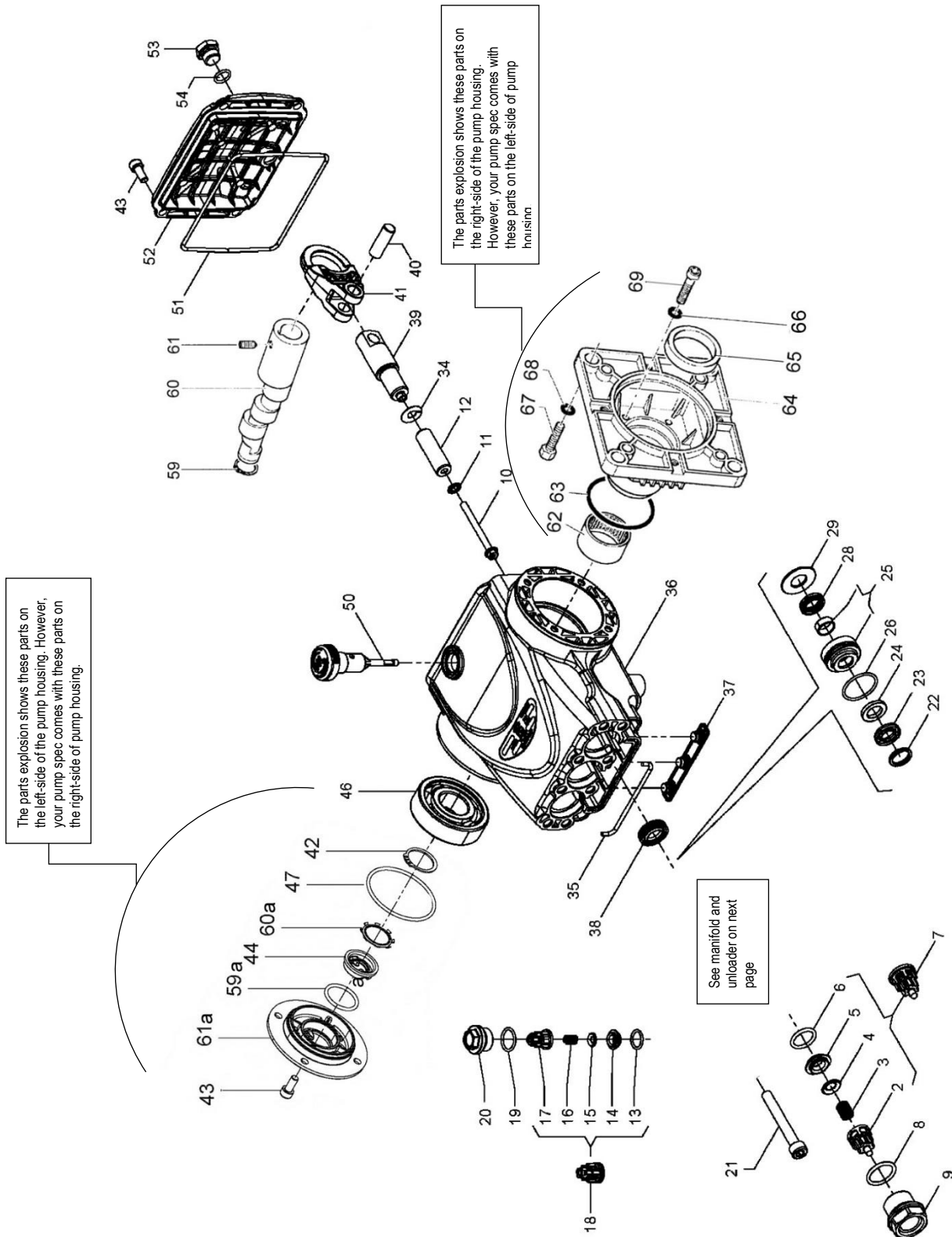
Ref#	P/N	DESCRIPTION	QTY
2	GP90358700	O-ring Ø 1.11x1.78	2
3	GP90358100	O-ring Ø 8.73x1.78	1
8	GP90357600	O-ring, Ø 6.75x1.78	2
9	GP36357100	Valve Seat	1
13	GP94739650	Spring, Ø 11.1x39.5	1
14	GP36356970	Pressure Regulator	1
15	GP36357051	Sliding Washer	2
16	GP97480200	Ball, 9/32"	1
17	GP36356551	Valve Guide	1
18	GP36356870	Nipple, Ø 1.8 G1/4"-M	1
19	GP36357770	Injector	1
20	GP94733250	Spring, 6.2x8.0	1
21	GP90365000	O-ring, Ø 8.00x1.00	1
22	GP97478200	Ball, 7/32"	1
23	GP94730770	Spring, 4.2x13.5	1
24	GP90357300	O-ring, Ø 5.28x1.78	1
25	GP36357670	Maximum Pressure Ring	1
26	GP99070000	Screw, M3x03	1
27	GP97613800	Cylindrical Pin, 4.0m6x20.0	1
28	GP36356770	Nipple, Ø 6.0 G1/4"-M	1
29	GP36356151	Adjustment Knob 1 30	1
30	GP90383700	O-ring, Ø 15.54x2.62	1
31	GP96710000	Washer, Ø 10.0x14.0x1.5	1

Ref#	P/N	DESCRIPTION	QTY
32	GP98196800	Plug, G 1/8"x8	1
33	GP36355951	Box	1
34	GP99159400	Screw, M5x25 7984	1
35	GP36355451	Box Cover	1
36	GP90360800	O-ring, Ø 28.30x1.78	1
37	GP99034400	O-ring, Ø 2.2x9.5 7049	4
38	GP92974100	M14x1.5	1
39	GP10745901	Wiring Switch	1
40	GP90381400	O-ring, Ø 5.23x2.62	1
41	GP36355551	Cover	1
42	GP99072900	Screw, 3x14 9707	1
43	GP36356351	Command Jaw	1
44	GP36356251	Clamping Jaw	1
45	GP99072930	Screw, M3x14	2
46	GP92193000	Nut, Ø M3x2.4	2
47	GP36358847	Bellows	1
48	GP36357465	Regulating Screw	1
49	GP36356651	Semi-disc	2
50	GP97613500	Cylindrical Pin, 3.0m6x12.0	2
51	GP97613700	Cylindrical Pin, 3.0m6x28.0	1
52	GP92192400	Nut, M4x3.2 5588	1
53	GP36607701	Shutter Guide	1
54	GP36607601	Valve Group	1

KIT NO.	GPK309	GPK400	GPK401	GPK402
KIT DESCRIPTION	INLET/OUTLET VALVE ASSEMBLY	GASKET, CRANKCASE	PLUNGER SEAL	PLUNGER SEAL WITH GASKET SUPPORT
ITEM NO'S INCLUDED IN KIT	39, 40	10	25, 26, 27, 28, 29	23, 24, 25, 26, 27, 28, 29
NUMBER OF PIECES	39-Qty 3, 40-Qty 3	3	3	1

Pump Exploded Views

A1571104



Pump Exploded Views

Ref#	P/N	DESCRIPTION	QTY
2	GP36202551	Valve Cage	3
3	GP94737600	Spring, Ø 9.4x14.8	3
4	GP36711501	Valve	3
5	GP36200366	Valve Seat	3
6	GP701115	O-Ring, Ø17.13x2.62	3
7	GP36711501	Valve Assembly	3
8	GP701002	O-Ring, Ø20.24x2.62	3
9	GP98222600	Valve Cap, M24x1.5x16.7	3
10	GP99169000	Plunger Bolt, M5x55	3
11	GP96690500	Washer, Ø 5x11.5x0.4	3
12	GP58040209	Plunger, Ø 18x42	3
13	GP701014	O-Ring, Ø 12.42x1.78	3
14	GP36211366	Outlet Valve Seat	3
15	GP36211276	Outlet Valve Poppet	3
16	GP94733300	Spring, Ø 6.2x10.4	3
17	GP36211151	Outlet Valve Cage Guide	3
18	GP36719301	Complete Outlet Valve	3
19	GP701016	O-Ring, Ø 15.6x1.78	3
20	GP98213700	Outlet Valve Cap, M18x1.5x10	3
21	GP99317500	Screw, M8x60	8
22	Not Available	Head Ring, Ø 18	3
23	Not Available	Packing, Ø 18, Hp	3
24	Not Available	Anti-Ext. Ring, Ø 18	3
25	GP58605801	Intermed. Ring, Ø 18	3
26	Not Available	O-Ring, 26.7x1.78	3
28	Not Available	Seal, Ø 18 Lp	3
29	GP58210870	Support Ring, Ø 18	3

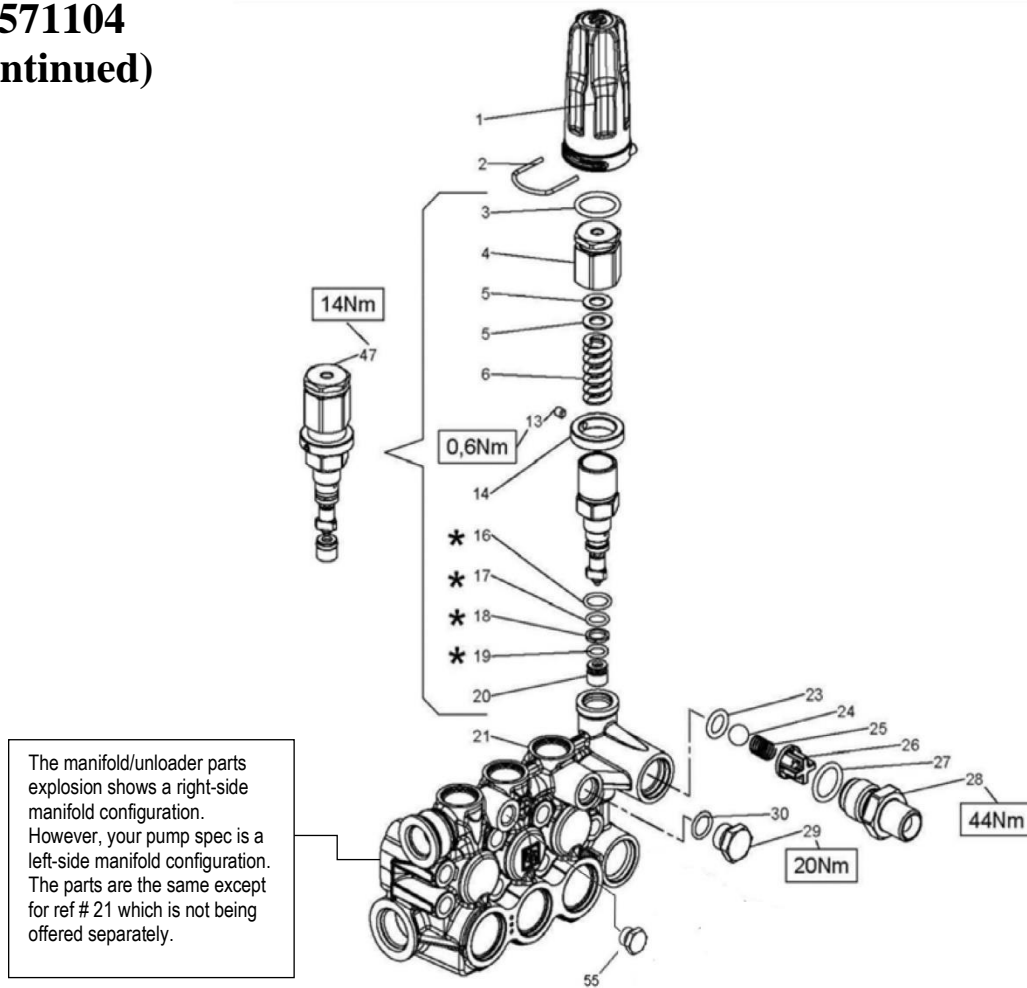
Ref#	P/N	DESCRIPTION	QTY
34	GP96698000	Washer, Ø 7.5x15x0.5	3
35	GP58210582	Gasket, Ø 3x94	1
36	Not Available	Crankcase	1
37	GP58210451	Drip Cover	1
38	GP90156550	Oil Seal, Ø 15x24x5.7	3
39	GP58050066	Piston Guide	3
40	GP97734000	Piston Pin, Ø 10x29.5	3
41	GP58030022	Connecting Rod	3
44	GP44211801	Sight Glass	1
47	GP90409700	O-Ring, Ø 55.56x3.53	1
50	GP98210500	Oil Dipstick	1
51	GP90392550	O-Ring, Ø 113.97x2.62	1
52	GP58160022	Rear Cover	1
53	GP98204100	Plug, 1/4"X9	1
54	GP701013	O-Ring, Ø 10.82x1.78	1
59	GP90063500	Circlip	1
60	Not Available	Crankshaft, 12 Mm	1
61	GP99179000	Set Screw, M6x6	1
62	GP91856800	Needle Bearing	1
63	GP90409700	O-Ring, Ø 55.56x3.56	1
64	GP10050422	Electric Flange	1
65	GP90168700	Oil Seal	1
66	GP203510	Washer, Ø 6.4x10x0.7	4
67	GP99460000	Screw, Hex, 1/2"X1-1/4"	4
68	GP96719500	Washer, Ø 13x18x1.1	4
69	GP99191200	Screw, M6x30	4

REPAIR KITS:

KIT NO.	GPK269	GPK270	GPK271	Ø 18	
				GPK274	Not Available
ITEM NO'S INCLUDED IN KIT	7 (2, 3, 4, 5, 6), 18 (13, 14, 15, 16, 17)	8, 9, 19, 20	38	22, 23, 24, 26, 28	22, 23, 24, 25, 26, 28, 29
NUMBER OF ASSY'S IN KIT	6	6	3	3	1
NO. OF CYLINDERS KIT SERVICES	3	3	3	3	1

Pump Exploded Views

A1571104 (continued)



Ref#	P/N	DESCRIPTION	QTY	Ref#	P/N	DESCRIPTION	QTY
1	GP36350651	Adjustment knob	1	20	Not Available	Seat	1
2	GP10084666	Fork for adjustment knob	1	21	Not Available	Manifold, left side unloader	1
3	Not Available	O-ring, Ø18.72x2.62	1	23	GP90382300	O-ring, Ø9.92x2.62	1
4	Not Available	Pressure adjusting nut	1	24	GP97483800	Ball, Ø13/32"	1
5	Not Available	Washer	2	25	GP94735500	Spring, Ø8.2x12	1
6	Not Available	Spring, Ø11.3x34.5	1	26	GP36310451	Valve guide	1
13	Not Available	Screw, M4X5	1	27	GP90383900	O-ring, Ø15.88x2.62	1
14	Not Available	Pressure ring	1	28	GP36348770	Nipple, 3/8" NPT-M	1
16	GP90358700	O-ring, Ø11.11x1.78	1	29	GP98204100	Plug, 1/4"x9 (U)	1
17	GP90358100	O-ring, Ø8.73x1.78	1	30	GP90358500	O-ring, Ø10.82x1.78 (U)	1
18	Not Available	Anti-extrusion ring	1	47	GP36605401	Valve Assembly	1
19	GP90357800	O-ring, Ø7.66x1.78	1	55	GP98196600	Plug, 1/8"x8	1

Limited Warranty

Dear Valued Customer:

The NorthStar Product you just purchased is built with the finest material and craftsmanship. Use this product properly and enjoy the benefits from its high performance. By purchasing a NorthStar product, you show a desire for quality and durability. Like all mechanical equipment this unit requires a due amount of care. Treat this unit like the high-quality piece of machinery it is. Neglect and improper handling may impair its performance. Please thoroughly read the instructions and understand the operation before using your product. Always contact NorthStar Product Support at 1-800-270-0810 prior to having any service or warranty work performed, as some services performed by parties other than NorthStar approved service centers may void this warranty. This warranty is in lieu of any other warranty expressed or implied and NorthStar assumes no other responsibility or liability outside that expressed within this warranty.

Limited Warranty

NorthStar shall warranty any piece of equipment manufactured, or parts of equipment manufactured, to be free from defects in material or workmanship for a period of:

NorthStar Warranty		
Item #	Consumer Warranty Period	Commercial Warranty Period
A1573001 A1573011 A1573021 A157306 A1575581 A1571101 A1571104	12 months from date of purchase by user	12 months from date of purchase by user

“Consumer use” means personal residential household use by a consumer. “Commercial use” means all other uses, including use for commercial, income producing or rental purposes or when purchased by a business.

This warranty applies to the original purchaser of the equipment (verification of purchase, in the form of a receipt, is the responsibility of the buyer), is non-transferable, and covers parts and labor. Parts will be replaced or repaired at no charge, except when the equipment has failed due to lack of proper maintenance. If a part is no longer available, the part may be replaced with a similar part of equal function. Any misuse, abuse, alteration or improper installation or operations will void warranty. Determining whether a part is to be replaced or repaired is the sole decision of NorthStar. NorthStar will not provide for replacement of complete products due to defective parts. Any costs incurred due to replacement or repair of items outside of a NorthStar approved facility is the responsibility of the buyer and not covered under warranty. Transportation costs to and from service center is the responsibility of the customer.

In addition to the normal warranty, NorthStar shall warrant any normal wear item from defects in material or workmanship for a period of 90 days from the date of purchase by user. Normal wear items include, but are not limited to, quick connect fittings, valves, seals, hoses, springs, O-rings, unloader valves and filter elements.

This warranty specifically excludes the following; failure of parts due to damage caused by accident, fire, flood, windstorm, acts of God, applications not approved by NorthStar in writing, corrosion caused by chemicals, use of replacement parts which do not conform to manufacturer’s specifications, damage related to rodent and/or insect infestation and damage caused by vandalism. Additional exclusions: loss of running time, inconvenience, loss of income, or loss of use, including any implied warranty of merchantability of fitness for a specific use. Also, Outdoor Power Equipment needs periodic parts and service to perform well, and this warranty does not cover instances when normal use has exhausted the life of a component or the engine.

This warranty does not cover any personal injury or damage to surrounding property caused by failure of any part. Repair or replacement of parts does not extend the warranty period.

Please fill in the following information and have it on hand when you call in on a warranty claim.

Customer Number: _____

Date of Purchase: _____

NorthStar Serial Number: _____

Item Number: _____

This page is left intentionally blank.



Manufactured by
Northern Tool + Equipment Co., Ltd
Burnsville, MN 55306
NorthernTool.com