TECH TIP: Maintaining the hydraulic system on your equipment will result in a longer life for all components. Using Guzzler high-quality filters, maintaining proper pressures, and servicing with the proper oils will contribute greatly to the overall life and performance of your hydraulic system.

Tailgate Cylinder (Fig. 1)

For half-open rear door - lowers and raises the tailgate.

Part No.	Description
1202183A	Hydraulic cylinder - 2 required per truck

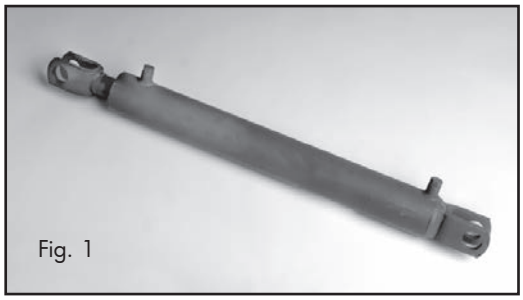


Fig. 1

Hoist Cyclinder (Fig. 2)

Raises debris body for dumping

Part No.	Description
1200334A	Hoist cylinder - 3 stage for Guzzler Classic
1200910	Hoist cylinder - Trunnion mount for XCR
1201676A	Hoist cylinder - Trunnion mount for DF ACE
1201931A	Hoist cylinder - Trunnion mount for CF ACE
1202137	Hoist cylinder - Trunnion mount for pressure off-load system


Fig. 2

Tailgate Manifold Assembly

Controls speed and has load-holding feature that locks tailgate in the up position.

Part No.	Description
1201958D	Hydraulic manifold - controls hydraulic door locks, 6 ports (Fig.3)
1202165	Hydraulic manifold - pressure control for full-open tailgate ACEs
1202194	Cartridge for 1201958D - hydraulic load holding check valve (not shown)
1201958A	Needle valve for 1201958D - adjusts speed of cylinder


Fig. 3

Related Items: See Page I-5 for selection of proper check valve or counterbalance valve.

Hydraulic Pump

Hydraulic pump for open-center system

Part No.	Description
1200419	Hydraulic gear pump
1200420	Hydraulic gear pump

Related Items: See Page I-9 for troubleshooting tips. See Section U for recommended oils, lubricants and fluids.

Variable-Volume Pressure-Compensated Pump

Used on most ACE units and Classic XCR. For correct hydraulic pump selection, call FS Solutions with your unit's serial number.

Part No.	Description
1200743	Hydraulic valve-volume pump - left-hand rotating spline drive
1200599D	Spool, Std. "C", VDP12 Style V

Control Valve

For the hydraulic system, such as opening and closing tailgate, lowering and raising debris body, and other options.

Part No.	Description
1200599	3-bank Hydraulic control valve (Fig.1)
1200599A	3-bank Hydraulic control valve with detent
1200327	Dust cap - keeps material away from spool
1200828	Relief valve - used to adjust pressure in hydraulic system
1201406	Wiper - keeps debris off spool
1201405	O-ring - seals each end of spool
1200954	Detent kit - allows handle to be in a held position.
1200323	Handle Kit for Valve Bank

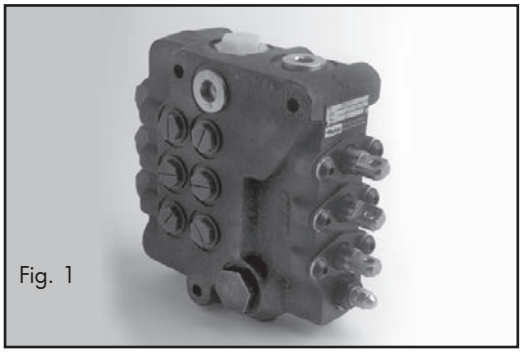


Fig. 1

Hydraulic Cylinders

Part No.	Description
1202215	Cylinder - opens and closes Dezurik valve
1201175A	Repair kit used for 1201175 - allows cylinder to be rebuilt and reused
1201816	Piston - fits 1201175
1201186	Rod clevis - allows cylinder to be connected to any option
1202199	Cylinder
1202208	Cylinder - for rear NX door

Hydraulic Filters

Part No.	Description
1200303	Suction filter
1202167	Spin-on 25 micron filter element
1200303A	Suction filter, old style
1200304	Suction filter element
1201309	Return filter assembly
1201310	10 micron filter element
46864	2" (51 mm) NPT suction strainer (Fig. 3)
48209A	Filter element for 48208A
42431A	Filter element for 48208A
42431B	10 micron filter element for 62643M
42431	10 micron filter element for 62643
42429	Oil filter assembly (SAE#20/10MIC)

TECH TIP: As with any oil filter installation, coat the seal on the new filter prior to installing it.

Filter Breather Assembly

Part No.	Description
70294	10 micron

Hydraulic Tank

Part No.	Description
1375213	50 gallon (189.3 liters) round style

Boom Motor

Part No.	Description
1202080	Hydraulic boom motor w/ brake
1200464	Motor, Hydraulic rotating boom

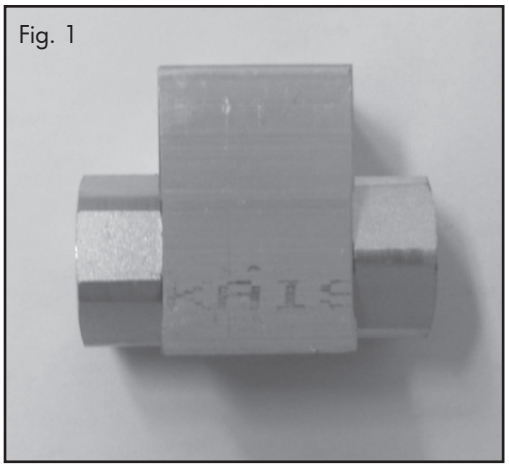
Boom Cylinder

Part No.	Description
45136C	Telescoping boom – Extendable cylinder
48440E	Telescoping boom – Lift cylinder
1202207	Fixed boom – Lift cylinder

Hydraulic Lock Assembly

Part No.	Description
89423	For full-opening tailgate system
89423H	Bolt for hydraulic lock assembly
89423N	Nut for Hydraulic lock assembly

Fig. 1



Tailgate Lock

Part No.	Description
1336149	Tailgate over-center lock

Shuttle Valve

Part No.	Description
47986	Hydraulic shuttle valve

Sandwich Valve

Part No.	Description
1201400	Check valve used to keep cyclone discharge valve seated when closed
1200350	Selector valve for Guzzler equipment
46644	Selector valve for Vactor equipment
1200348	Flow divider valve

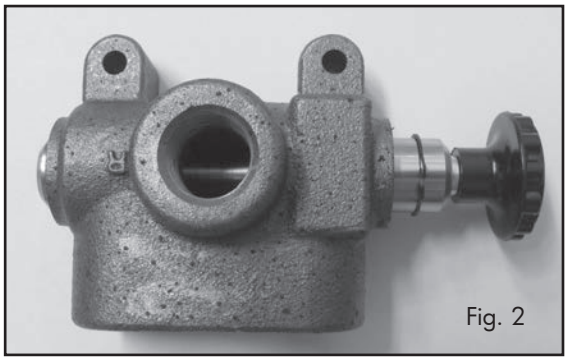


Fig. 2

Solenoid Valve

Part No.	Description
1200341	12V
1201771	Block center used in conjunction with variable volume pump
1201780	12V, open-center used in conjunction with open-center system hydraulic pump
1201994	Directional valve, A-B tank
45302H	Valve Hyd. Directional, solenoid
45302EA	Valve, Sect, 2nd or 3rd 45302E
45302IA	Valve, Sect, 1st on 45302I
45302D	Valve, Std. Directional, Solenoid
45302B	Coil, 12V, Dual Wires, for BV06
1191011	Connector, Din Standard

Subplate for Solenoid Valves

Part No.	Description
1200344	Sub plate
1200346	Sub plate - dual
1200951	Sub plate - 2 station parallel
1202008	Sub plate - 3 station parallel

Hoist Cylinder Controls

Part No.	Description
1201570	Valve 6 port - used for boom functions and on ACE and Guzzler tailgates
1202206	Dual valve - used for hoist cylinder with a power up or down

Related Items: See Page I-9 for troubleshooting tips.

Vibrator

Used to loosen debris when emptying the tank.
Should not be held down continuously.

Part No.	Description
1200353	Hydraulic vibrator
1200592	Motor, global hyd. vibrator

TECH TIP: For maximum vibrator life and to lessen the possibility of damaging the vacuum tank/debris body, run the vibrator 45 seconds or less ON and 90 seconds or more OFF in order for the vibrator to cool down. Never operate the vibrator with an empty tank or unless you are emptying the debris body. Running the vibrator with the tailgate closed will cause material to pack and become more difficult to empty.

Related Items: See Page I-9 and I-10 for troubleshooting tips.

Recommended Practices for Handling and Storage of Hydraulic Components

The life of the hydraulic system is directly related to cleanliness. Typically, the cleaner a system is, the longer it will last. Particle or chemical contamination. Therefore is the enemy of any hydraulic system and extra effort should be taken to avoid contamination whenever and where ever possible. The following is a list of good practices to reduce or eliminate potential contamination while storing, handling, assembling and using hydraulic system components.

Ports & Fittings

- Port plugs should remain in components and hoses until ready to use.
- Use care in removing port plugs so that plastic does not shear off in the threads
- Use caution to ensure excess paint near the port face does not chip or fall off the unit.
- The area around the port face is a sealing surface and should be protected from dents or contamination
- Fittings being screwed into the port should be clean and lubricated.

Assembly & Storage

- Hose and tube assemblies should be flushed and capped until used.
- Reservoirs should be pickled treated with rust protection and sealed until used. At the time of use the rust protection must be flushed out.
- Never use shop air to blow out a tube, hose or reservoir as the air supply may not be “clean” air.
- Filter caps should be kept clean
- Hydraulic assembly areas should be free of airborne contaminants.
- If components are stored in a cold environment, be sure to remove any condensation that may occur as components warm up.
- If storage is prolonged, components, may need to be rust proofed.

Fluids

- Hydraulic fluid should be filtered to ISO 18/13 or better for initial fill.
- Water and hydraulic fluid do not mix; water is considered a foreign chemical contaminant
- Any surface in contact with hydraulic fluid must be clean and dry.
- Random sampling should be taken from hydraulic system on vehicles ready to ship to ensure cleanliness level meets ISO 18/13 or better.

Exposed Surfaces

- Exposed cylinder rods should be handled with care to avoid scratches and dents.
- Motor and pump shafts should be kept clean and free of physical damage. Splines should be coated with anti-seize compound or grease before assembly. Tapered shafts should also be protected from physical damage to shaft and coupling ID.

Recommended Start-up Procedure for New or Rebuilt Pump or Motor

Before installing a new or rebuilt pump or motor, back out the main relief valve until the spring tension on the adjusting screw is relaxed. This will avoid the possibility of immediate damage to the replacement unit in the event that the relief valve setting has been increased beyond the recommended operating pressure prior to removing the old unit.

Before connecting any lines to the pump or motor, fill all ports with clean oil to provide initial lubrication. This is particularly important when the unit is located above the oil reservoir.

After connecting the lines and mounting the replacement unit, operate the pump or motor for at least two minutes at zero pressure at the lowest possible RPMs. During this break-in period, the unit should run free and not develop an excessive amount of heat. If the unit operates properly, the speed and the pressure can then be increased to the normal operating settings.

Reset the main relief valve to it's proper setting while the pump is running at maximum operating engine (motor) speed for the vehicle.

ALWAYS USE AN ACCURATE GAUGE WHEN ADJUSTING THE RELIEF VALVE PRESSURE SETTING.

PROBLEM	PROBABLE CAUSE	REMEDY
Excessive pump noise	Low oil level in the reservoir	Fill reservoir to the proper level with the recommended transmission fluid. DO NOT over fill or damage may result.
	Air in the system	Open reservoir cap and operate hydraulic system until purged. "bleed" hydraulic lines at the highest point downstream of auxiliary pump and while system is under pressure.
	Vacuum condition	Check inlet (suction) line and fittings for leaks. Check auxiliary pump function.
	Oil too thick	Be certain correct type of oil is used for refilling or adding to the system.
	Cold weather	Run hydraulic system until unit is warm to the touch and noise disappears.
Pump overheating	Internal leakage	If established that excessive internal leakage is evident, return the vehicle to maintenance shop for evaluation and repair.
	Heat exchanger not functioning (if so equipped)	Locate trouble and repair or replace.
	Fluid level low	Add oil to operating level.
	Relief valve and compensator settings	Set relief valve and compensator in proper sequence to match schematic
System not developing pressure	Relief valve open (if so equipped) Compensator mis-adjusted	Replace one or both. Do not attempt to repair cartridges, they are factory assembled and preset.
	Loss of fluid internally (slippage)	Return vehicle to maintenance shop for repair of hydraulic system.
Loss of fluid	Ruptured hydraulic lines	Check all external connections, tubing and hoses. Tighten connections, replace ruptured tube or hose.
	Loose fittings	Observe mating sections of hydraulic for leaks. Replace seals or gaskets if possible.
	Leaking gaskets or seals in pump of circuit	Replace seals or gaskets if possible.
Miscellaneous	Sheared shaft key	Locate and repair.
	Disconnected or broken drive mechanisms	

PROBLEM	PROBABLE CAUSES	REMEDY
Vibrator will not run	Power source not connected to vibrator	Check all connections.
	Push button or solenoid not functioning	Replace component.
	Vibrator not grounded properly (DC only)	Remove vibrator from mount and clean any paint, heavy rust, etc. from mounting surface. Add ground strap from truck box to frame.
	Vibrator failure	If warranty is still in effect, contact factory.
Vibrator noisy	Vibrator mounting bolts loose	Re-torque mounting bolts.
	Broken welds on mounting assembly	Repair welds.
	Motor brushes (DC only) on bearings worn	Repair or replace.
Fluid leakage (hydraulic only)	Loose fittings.	Replace one or both. Do not attempt to repair cartridges, they are factory assembled and preset.
		Return vehicle to maintenance shop for repair of hydraulic system.
Fluid in housing (hydraulic only)	Motor seal failure.	Check all connections, and replace if necessary.
Excessive back pressure (hydraulic only)	Running equipment on return line.	Run dedicated return line.
	Return line too small.	Use 3/4" (19.05 mm) or larger line.
	Cause drain not used.	Run 1/2" (12.7 mm) or larger line from tank to case drain.
Pressure spikes (hydraulic only)	Running equipment from pressure line.	Run dedicated pressure line for vibrator with flow control valve and follow plumbing diagram.
	Turning on pressure with oil flow set on max.	
	Running system without a pressure relief valve before vibrator, or instant start when vibrator is cold.	
Over-speeding (hydraulic only)	Running system without controlling oil flow to vibrator.	Set max. oil flow to vibrator at or below max. rated G.P.M.