



## Installation Instructions

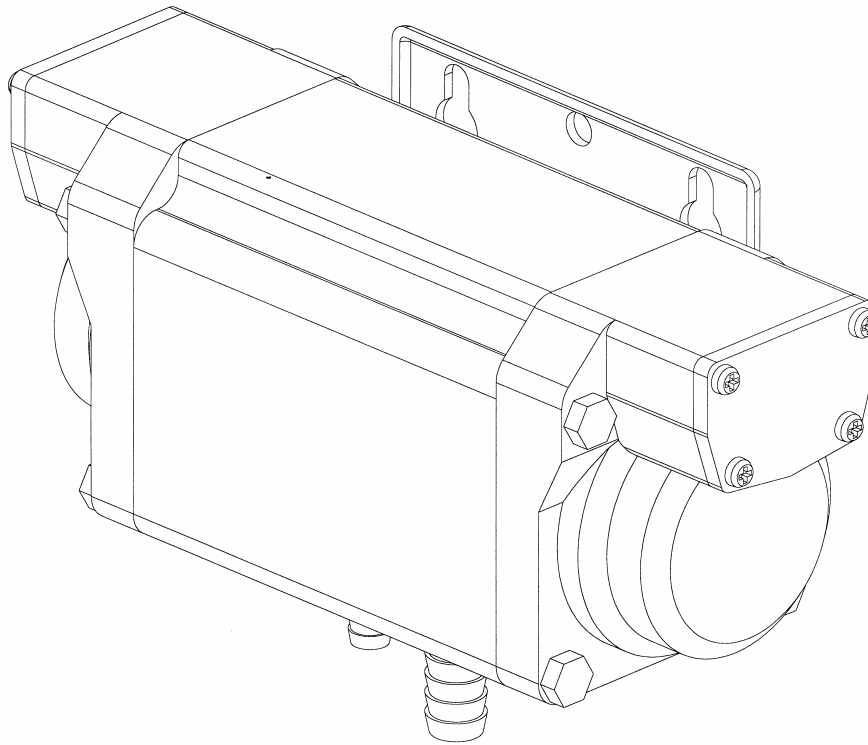
Model

318-KIT-01

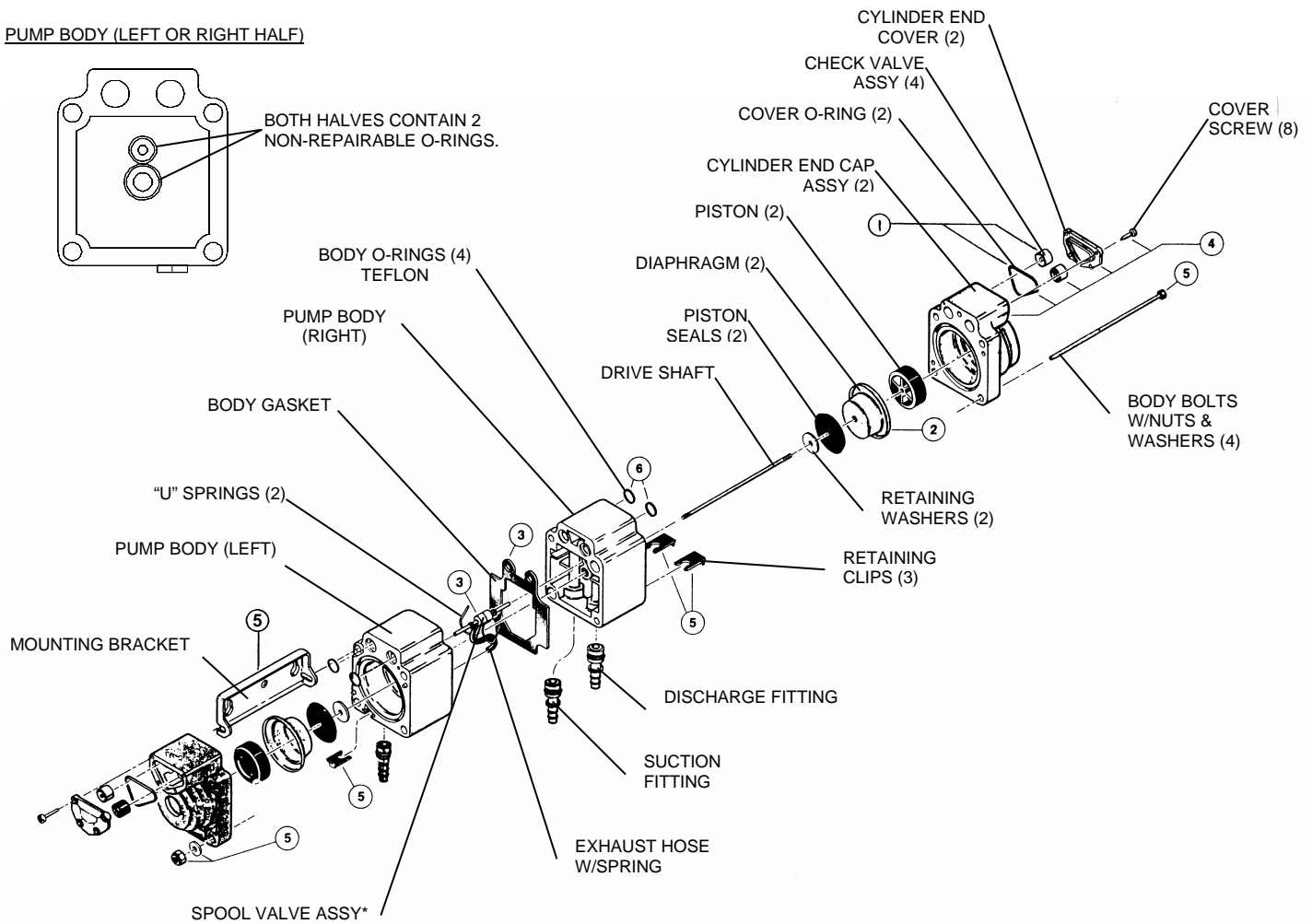


**INSTRUCTIONS**

This manual contains important information concerning the installation and operation of the equipment listed at the right. **Read manual thoroughly and keep for future reference.**



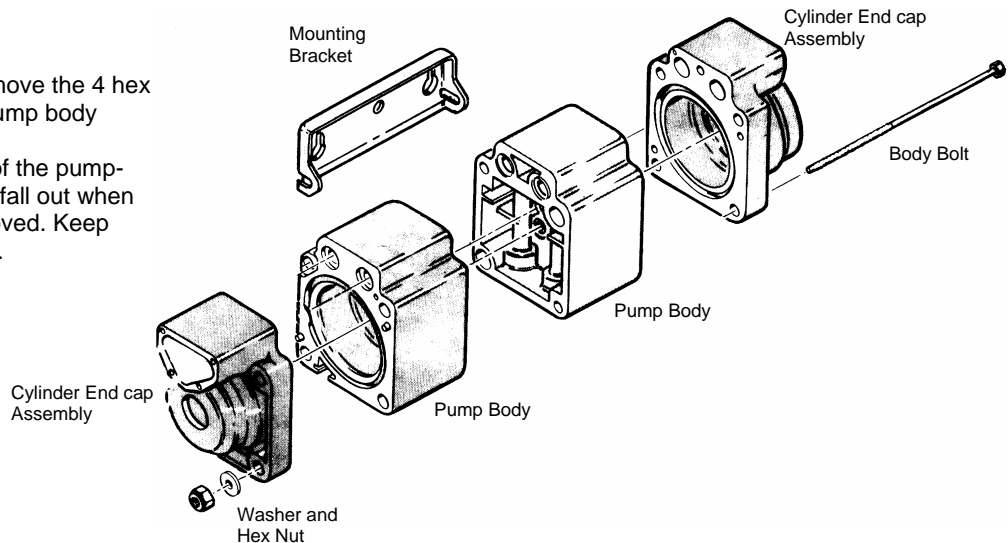
**PUMP BODY (LEFT OR RIGHT HALF)**



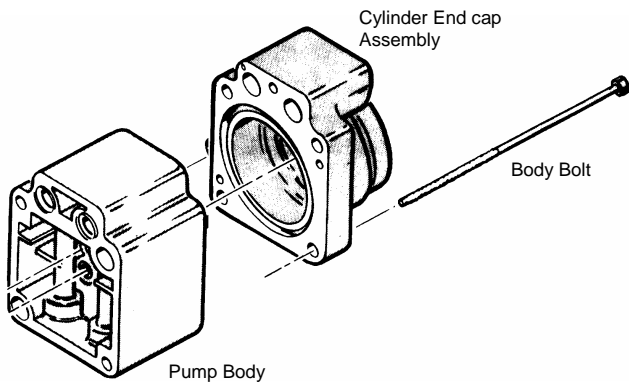
KEY	PART #	DESCRIPTION	QTY
1	20467-000	KIT CHECK VALVE ASSEMBLY	4
		E.P.D.M.	
	20467-001	BUNA	
	20467-002	VITON*	
2	20467-003	SANTO	2
		KIT DIAPHRAGM (includes pistons)*	
	20466-000	EPDM	
	20466-001	BUNA	
	20466-002	VITON*	
	20466-003	SANTO	

KEY	PART #	DESCRIPTION	QTY
3	20469-000	KIT SPOOL VALVE & "U" SPRINGS	1
		SANTO*	
	20469-001	BUNA	
4	20469-002	VITON*	2
		KIT CYLINDER END COVERS	
	20468-000	EPDM	
	20468-001	SANTO	
	20468-002	BUNA	
	20468-003	VITON*	
5	20465-000	HARDWARE KIT	1
6*		(included in kit)	

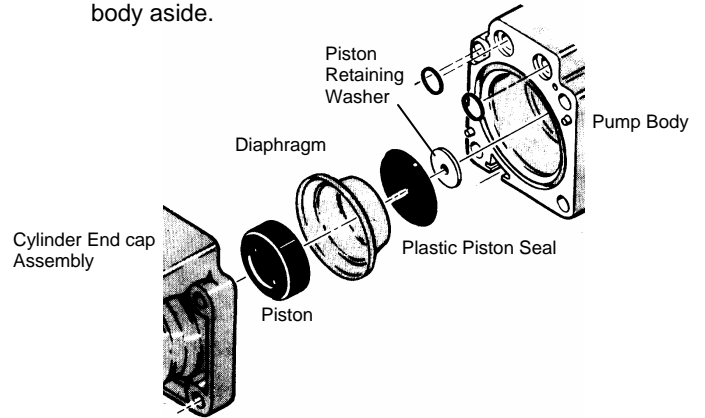
- Use a 5/16 nut driver and remove the 4 hex nuts and washers from the pump body bolts.  
**NOTE:** Notice the position of the pump-mounting bracket. These will fall out when the top rear body bolt is removed. Keep track of these for reassembly.



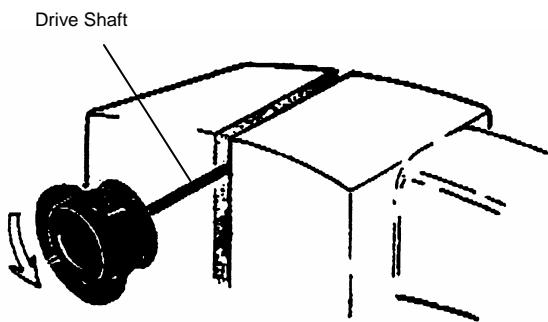
2. Pull body bolts from pump. Cylinder end cap sub-assemblies, pump mounting brackets, pump o-rings and retaining clips will come free of pump. Wash these parts with warm water and set aside. Using a razor blade or sharp knife cut the label on the front of the pump along the seam in the center of the pump body.



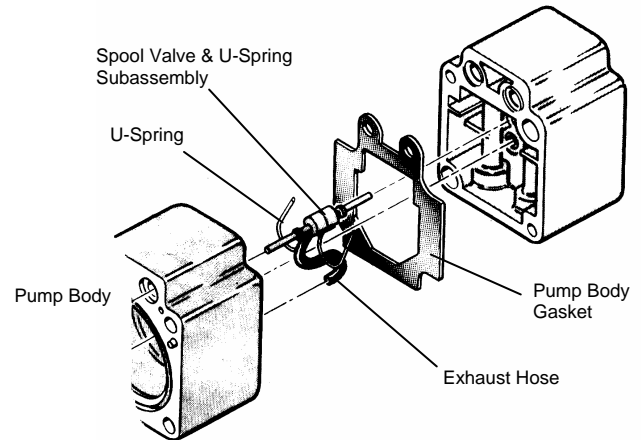
3. Grasp a piston in each hand and twist each side counter clockwise. The piston on one side will start to unscrew. Remove the piston, the old diaphragm, the plastic piston seal and the metal piston-retaining washer from the drive shaft. Hold the pump body together with one hand and slowly pull the remaining piston and drive shaft from the pump. Set the pump body aside.



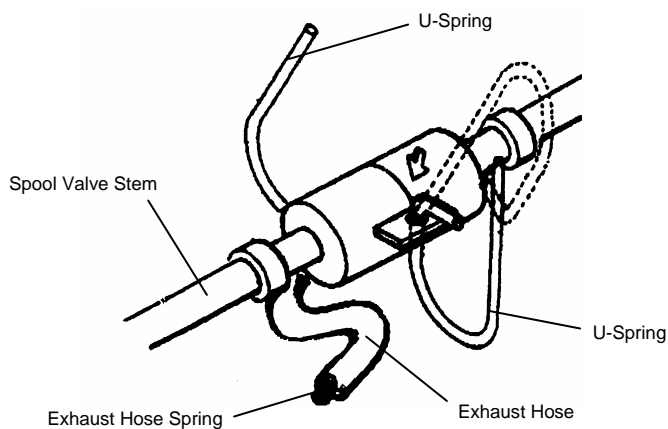
4. Carefully clamp the drive shaft into a vise with wood block jaws. Turning piston counter clockwise unscrew piston from shaft and remove the old diaphragm, the plastic piston seal and the metal retaining washer. Wash parts with warm water and set aside. Discard old diaphragms and install new diaphragm and piston assembly onto drive shaft and hand tighten. Unclamp drive shaft from vise and set aside.



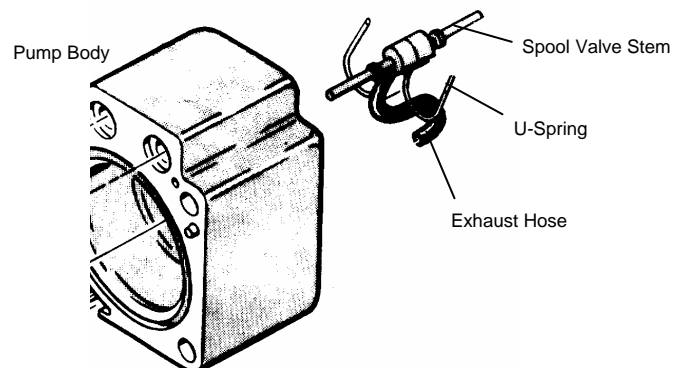
5. With pump label facing you, slowly pull body apart. Discard old body gasket. Disconnect exhaust hose from muffler fitting. Carefully pull spool valve stem from pump body. Discard old spool valve assembly. Wash pump body with warm water and set aside. **NOTE:** With pump facing you, the u-spring on the spool valve mounts in the left side of the pump body.



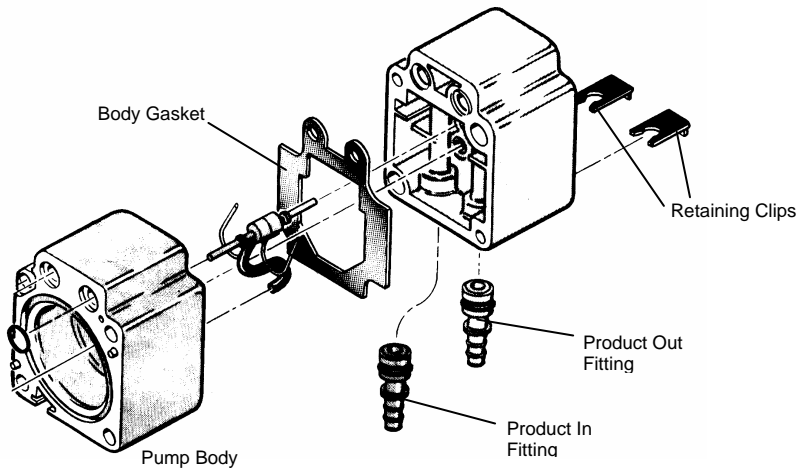
6. To assemble new spool valve sub-assembly insert internal exhaust hose spring into exhaust house. Connect hose to spool valve. Mount u-spring into spool valve straight side first. Push u-springs through spool valve to bend hook up.



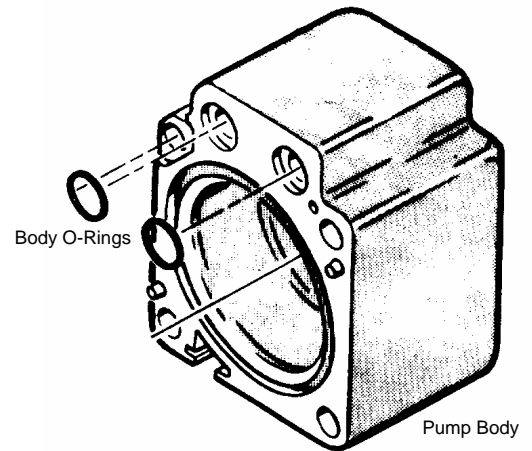
7. Lubricate spool valve stem with an FDA approved Lubricant (such as Dow Corning #7) and insert stem into left side pump body making sure u-springs are positioned in retaining niches. Carefully push spool valve into pump until u-springs snap inward and lock into place. Reconnect exhaust hose to muffler fitting. **CAUTION:** If exhaust hose is not reconnected to muffler fitting pump will not operate



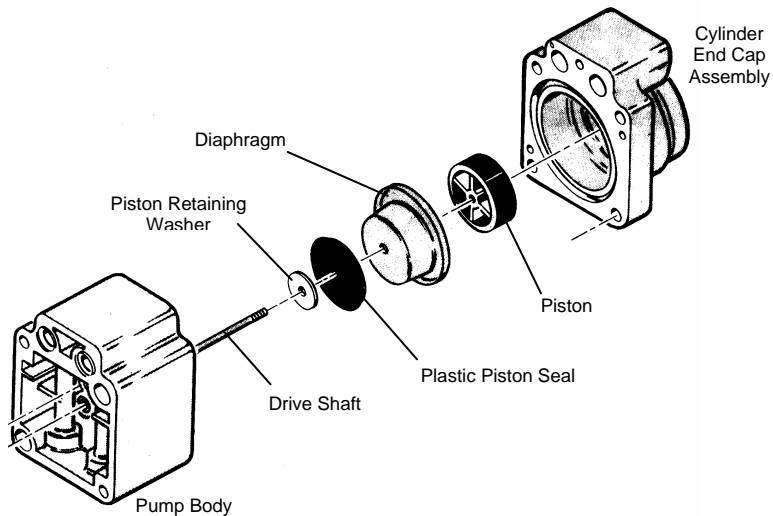
8. Position new body gasket and press pump body together. Reinsert product out and product in fittings into pump and slide retaining clips over fittings until they snap into place. This will help hold the pump together during assembly.



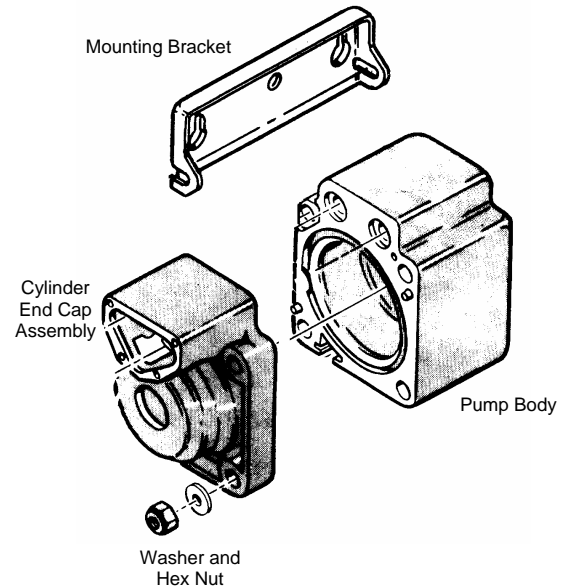
9. Remove and discard old body o-rings. These are located in outside top part of the pump body on the cylinder side. Lubricate new body o-rings with an FDA Approved Lubricant. Install into pump body.



10. Lubricate with an FDA Approved Lubricant and very carefully reinsert the drive shaft through the pump body. Install new diaphragm and piston assembly onto drive shaft and hand tighten. Note positioning and direction each part is facing.



11. Position cylinder end caps onto pump body. Insert pump body bolts and hand tighten washers and hex nuts on each bolt. **NOTE:** Remember to reinsert mounting bracket into niches between body and cylinder end caps before inserting top rear body bolt.



12. With a 5/16 nut driver, alternately tighten each body bolt, maintaining even pressure around pump body. Using a 5/16-torque wrench, tighten body bolts to 15 in. lbs. Test pump and return to service.