# **Operating Manual**

2450 Soil Sampler



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#### AMITY TECHNOLOGY, LLC PRODUCT WARRANTY

Amity Technology, LLC warrants to the original purchaser only, each new item of Amity Technology sold by it to be free of defects in workmanship materials for a period of twelve (12) months from the date the product is delivered to the Purchaser (Warranty Period).

The sole obligation of Amity is limited to the repair or replacement, whichever Amity chooses, of those parts which Amity, in its sole discretion, determines to have failed as a result of a defect in workmanship or material occurring during the Warranty Period. Such defective part will, at the option of Amity, either be repaired or replaced to the Purchaser through an authorized Amity dealer. The Purchaser must, within the Warranty Period, give written notice to an authorized Amity dealer and the dealer will have a reasonable time to repair or replace the defective part. Amity's dealer's claimed labor hours must be fair, reasonable and consistent with industry practice.

This Warranty does not cover damage to other parts of the product caused as a result of delay by the Purchaser to repair or replace defective parts. Amity will not be liable for direct or indirect costs other than those specified and this Warranty specifically excludes damage to crops, loss of use, transportation expense to a dealer, service calls, normal maintenance and upkeep costs, overtime labor costs, and any and all other injuries, claims or consequential damage or other economic loss. This Warranty does not cover damage caused to or by any equipment, accessories or parts attached to or used in connection with Amity equipment. This Warranty shall be void if alteration, modifications or additions are made to Amity products without written consent of Amity, or if in Amity's judgment, the failure was due to abuse or neglect in the operation or maintenance of the product. This Warranty shall only apply if Amity equipment is used for its recommended agricultural purpose. No dealer, salesman, or agent has any authority to alter or amend this Warranty.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND THERE IS NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

#### WARRANTY VOID IF NOT REGISTERED

#### WARRANTY REGISTRATION

#### PLEASE READ THE FOLLOWING INFORMATION REGARDING THE WARRANTY REGISTRATION OF YOUR NEW 2450 SOIL SAMPLER.

Thank you for your purchase. Amity Technology, LLC will warranty each new Soil Sampler to be free from factory defects in material and workmanship under normal use and service, when operated in accordance with factory instructions. Warranty will cover a period of one year from the date of purchase.

Amity Technology's obligation under this warranty is limited to the supplying of replacement parts in exchange for any parts which are defective. The warranty does not cover normal wear from usage. This warranty is void on any unit which has been tampered with or which has been subject to misuse, negligence or accident. Any part being returned for warranty service must be sent to Amity prepaid, and will be returned to you at our expense.

To obtain registered warranty coverage, please complete the section below and return it to Amity within 30 days of purchase.

Customer Name	
	_State/Prov
	_ Phone #
Dealer Name	
Address	
	_State/Prov
Purchase Date Custo	mer Signature

Return to:	Amity Technology, LLC
	2800 7 <sup>th</sup> Avenue North
	Fargo, ND 58102
	701.232.4199
	701.365.8323 fax



The purpose of this manual is to assist you in safely operating and maintaining your Amity equipment. It is the responsibility of the owner to ensure that any operator takes the time to thoroughly read and understand the information given.

It is not possible to overstate the importance of safety. Serious injury or death can result from improper operation of any farm equipment. We have taken great care to point out potential hazards that require special consideration. Give all precautions and warnings the attention they deserve.

- ALWAYS keep hands away from moving parts
- ALWAYS avoid high pressure fluids. Use a piece of cardboard or wood to search for suspected hydraulic leaks.
- ALWAYS disconnect power cable from battery connections before servicing any part of the electrical system. Make all other connections before connecting the power cables.
- ALWAYS disconnect power cables from battery when soil sampler is not in use.
- NEVER move vehicle when probe is lowered.
- DO NOT allow power unit to keep running after cylinder has reached the end of its travel.
- DO NOT allow vehicle to raise more than 4" to 5". If probing in hard soil, ballast may be added to the pickup to allow better soil penetration.

## 2450 ASSEMBLY

1. Insert the three rubber mounts into the pickup truck's stake pockets: one in each of the front pockets and one in the rear or middle stake pocket on the driver's side. Mount the channel frame of the 2450 to the front rubber mounts. With the transport lock bracket over the passenger side mount, tighten the rubber mounts allowing approximately 1" of threads to be exposed on the rear and passenger side mounts. This will allow the bolt of the rubber mount to anchor the braces using the T-handles. Tighten the driver side mount to secure the channel to the pickup, and make sure no threads are above the nut. The bolt may have to be cut off.

Note: If your model is equipped with the air blast option you may need to use the included adapter plates to mount the sampler farther away from the cab of the pickup.

 Drop the ends of both brace assemblies over the pin on top of cylinder mount. Secure them with a flat washer and a hairpin.





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 Mount the other end of the brace assemblies to the rubber mounts using the T-handles. Tighten the 3/8" bolt and jam nut on the brace assembly arms to stabilize the cylinder mount.



## 2450 ASSEMBLY

4. Install the tie down chain assembly which will anchor the sampler to the pickup preventing it from pulling out of the stake pockets. Drill a .375" - .5" hole beneath the tie down chain assembly, through the box bed and into the frame of the pickup. Use .375" nut, lock washer, and plate to secure tie down to frame of pickup. Tighten the tie down assembly with the turnbuckle.



#### CAUTION: CHECK UNDERNEATH BOX TO BE SURE HOLE IS DRILLED INTO AN UNOBSTUCTED AREA AND INTO FRAME.



5. Mount the sampler so that there is approximately 18 inches of clearance between the bottom of the tip and the ground. The height can be adjusted by loosening the .375" bolt on the pivot bracket and moving the cylinder anchor tube up or down. This will maximize the ground clearance while still being able to retrieve a full 24 inch sample.



6. Loosen the .375" bolt and jam nut to lower the support stand to the bed of the pickup. With most of the weight of the sampler being supported by the stand retighten the .375" bolt and lock into position with jam nut. This will support the sampler when retracting the probe and prevent damage to the sidewall of the pickup box.



#### 2450 SERIES OPERATING INSTURCTIONS

#### **Field Preparations**

- 1. Loosen brace assemblies.
- 2. Adjust soil sampler so that it is vertical from front to back as shown in **Figure 1**.
- Adjust sampler from left to right keeping it slightly beyond vertical to the outside as shown in Figure 2. This will compensate for any initial upward movement of the pickup when sampling. Tighten all adjusting bolts.
- 4. Connect the power and ground cables to the battery. Be sure the white cable is connected to the positive terminal and the black cable to the negative terminal.
- Be sure the power unit reservoir and hydraulic cylinder are full. Many different types of hydraulic oil can be used, but we recommend using automatic transmission fluid (ATF).

**Note:** The hydraulic reservoir has a capacity of three quarts. Oil level should be 1" to 1.5" below top of reservoir.

- Rephase hydraulic cylinder by fully raising and lowering hydraulic cylinder 3 or 4 times. This will insure that no air is in the hydraulic system.
- 7. For monitoring probe depth, mark the front side of the probe with red nail polish, paint, or tape at the depth you want to sample.
- Set the outside rear view mirror to see bottom portion of sampler. When your mark reaches the probe guide (bottom plate) the desired depth has been reached.
- Make sure the cylinder is fully raised and the sampler is adjusted for approximately 18" of ground clearance before moving throughout the field.









10. The guide rods should be flush with the nuts on bottom of probe guide. No threads should go beyond the nut.

IMPORTANT: The scraper is spring loaded and must be installed down.

IMPORTANT: When operating in the field, run the pickup at a higher RPM to insure maximum output of pickup alternator. Running at lower RPM's will cause drainage of pickup battery.

#### SAMPLING

1. Loosen guide rod lock bolt.

IMPORTANT: The guide rod lock bolt must be loose during operation of soil sampler to prevent bending of guide rods. The bolt should always be tightened when transporting the soil sampler.

2. Drive to sampling site and place pickup in park; hold your foot on the brake pedal to insure against pickup movement.

# NOTE: If sampling on a side hill, always have sampler on downhill side of pickup.

3. Activate hand held control switch until probe reaches desired depth. The probe will enter into the ground filling the soil probe.

CAUTION: DO NOT ALLOW VEHICLE TO RAISE MORE THAN 4" TO 5". IF PROBING IN HARD SOIL, BALLAST MAY BE ADDED TO THE PICKUP TO ALLOW BETTER SOIL PENETRATION.

- 4. Switch is then reversed to pull the probe and sample upwards. While the probe is coming up, a spring loaded scraper automatically scrapes the soil sample out through the open side of the probe.
- At the same time, the core is deposited into the stainless steel collection bucket. Up to twenty-five 24" samples can be collected in this manner without leaving the pickup cab.
- 6. Drive to next location and repeat.

#### CAUTION: DO NOT MOVE VEHICLE WITH PROBE LOWERED AS DAMAGE TO THE BUCKET AND/OR SAMPLER MAY OCCUR.

- 7. When the collection bucket is full, remove it from sampler and empty contents.
- 8. Clean probe and tip, reattach soil bucket, and continue sampling.

#### **TIP SELECTION**

- 1. Your soil sampler is shipped with one probe and two replaceable tips for different soil conditions.
- 2. The "wet" tip has a smaller opening and a beveled or rolled edge. While the "dry" tip has a larger opening and a sharp edge.
- 3. When sampling, try different tips to find the one that gives the best sample.
- 4. Despite the use of different tips, sampling may not be possible if one to the following exist:
  - Excessively dry and hard ground
  - Loose sand
  - Sticky Clay
  - Too much green growth
  - Frozen ground
  - Excessively wet ground
  - Too much straw or debris

**REMEMBER:** Soil sampling is like moldboard plowing, if it will not scour, you have three alternatives:

- Try a different tip as provided
- Use PAM or WD-40 lubricant on tip and probe
- Quit sampling and wait for soil conditions to improve

Functions a cutting tip must perform to be successful:

- Compress the soil
- Cut the core
- Allow the core to expand on the back side of the cutting tip immediately.

#### SAMPLING IN WET OR STICKY CONDITIONS

PAM cooking spray or WD-40 may be used as a probe lubricant when soil clings to cutting edges or causes tip plugging. Clean soil from tip and probe before thoroughly spraying tip and inside of probe. Each application should be sufficient for 8 to 12 samples. No contamination to the sample will occur with these lubricants.

NOTE: If soil sample does not drop into box or soil remains compacted in probe tip, adjust the scraper mount up or down on probe guide assembly. Adjust by use of .375" bolt and hex nut.

#### TO FOLD UNIT FOR TRANSPORT

- 1. Remove stabilizing brace assemblies and store them in pickup box.
- 2. Carefully lower the sampling unit to its horizontal position, resting the sampler unit on the vertical stop.
- 3. Slide the sampler towards the center of the pickup box until the pin is inserted in the transport lock bracket. Secure the sampler in the transport position with washer and hairpin. (Figure 3)



#### **REMOVING THE PROBE**

- 1. Fully retract cylinder and tighten guide rod lock bolt. (Figure 3)
- 2. Extend cylinder slightly to make attaching pin accessible and remove spring pressure from the probe.

NOTE: If you model is equipped with the air blast options make sure that the air injector arm is clear of the probe end before extending the cylinder.

- 3. Remove attaching pin and rotate probe out through bottom probe guide assembly.
- 4. To install probe, rotate scraper (1) forward and install probe (2) on an angle through probe guide (3) as shown in **Figure 4**.

Note: Be certain that scraper is installed towards bottom of probe.



FIGURE 4

FIGURE 3

#### 2450 SERIES SOIL SAMPLER REFERENCE GUIDE

- Three quarts of hydraulic fluid is required, automatic transmission fluid (ATF) is recommended.
- If sampling on a side hill, always have sampler on downhill side of pickup.
- If soil sample does not drop into box or soil remains compacted in probe tip, adjust the scraper mount up or down on probe guide assembly.
- The scraper is spring loaded and must be installed down.
- When operating in the field, run the pickup at a higher RPM to insure maximum output of the vehicle alternator. Running at lower RPM will cause drainage of pickup battery. Consideration should be given to installing a heavy duty oversized alternator.
- Majority of service problems are related to poor grounding. Be sure unit is grounded to the battery.
- The guide rod lock bolt must be loose during operation of soil sampler to prevent bending of guide rods. Always tighten guide rod lock bolt when transporting.

#### MAINTENANCE

Daily:

- Check oil level and fill if necessary.
- Keep power unit and wiring free from oil and dirt.
- Tighten all mounting and adjusting hardware.
- Inspect springs and replace if they have lost their compression and will no longer push the probe guide to the ground.

Oil Filter:

• Clean screen inside power unit reservoir if probe begins to operate slowly.

# **TROUBLE SHOOTING**

PROBLEM	POSSIBLE CAUSE	POSSIBLE REMEDY
Cab switch is opposite of probe operation	Hydraulic hoses connected wrong	Reverse hoses on the power unit
Power unit will not run	Power cable disconneced from battery	Connect power cable
	Power unit wired incorrectly	Compare to wiring diagram in assembly section
	Power unit has insufficient ground	Check ground to battery on vehicle
	Vehile battery insufficiently charged	Charge battery, check vehicle alternator 65-75 amp minimum output required
Motor runs but probe does not raise or lower	Power unit is out of oil	Fill reservoir with oil (holds 3 quarts)
	Solenoid valve coil bent	Remove and replace solenoid valve. Never use solenoid valve as handle when handling power unit
Soil sampler has spongy action	Air in system	Drain foamed oil from power unit, lines and cylinder. Refill with fresh oil
Power unit leaking oil from vent cap	System over full of oil	Check oil level
	Oil is splashing into vent cap from driving on rough terrain	Install a 5" nipple and a female closed coupler between reservoir and cap
Soil probe bending	Soil conditions too hard	Wait for soil conditions to improve
	Operator is allowing vehicle to lift excesssively	Keep vehicle from tilting by applying ballast to probe side of vehicle
	Vehicle has moved during soil sampling	Always have vehicle in park and brake applied while collectiong sample. If on a side hill always probe with the sampler on the downhill side of the vehicle.

PROBLEM	POSSIBLE CAUSE	POSSIBLE REMEDY
Probe operates too slow	Oil filter is plugged	Clean oil filter screen inside
		power unit reservoir
	Oil is stiff from cold temperature	Use Dexron automatic
		transmission fluid for all
		applications
Pump is cavitating	Oil is low	Fill oil reservoir
	Oil filter screen is dirty	Clean screen
Soil sample does not drop	Probe guide is not following probe	Loosen set bolt on rod guide
into box	to ground	Loosen set bolt on rou guide
	Guide rods are bent	Remove and straighten or
		replace
	Springs have lost compression	Replace springs
	Scraper mounted too low	Adjust scraper
Soil compacted in probe tip	Soil conditions too wet	Wait for conditions to improve
	Wrong tip being used	Be sure proper tip has been
	wrong tip being used	selected
		Sciected
	Soil clinging to tip sides	Thoroughly clean tip, probe and
		scraper, apply PAM or WD-40
		lubricant
	Scraper bent	Straighten or replace scraper
	Loose soil fallling in around core	Steer vehicle to the right before
		stopping to take samples; take
		sample in the compacted wheel track
		liack
	Probe is running into wet zone in	Select proper tip -
	lower soil layer	Wait for excessive moisture to
		recede below sampling depth
	Tip cutting edge is worn out	Replace with new tip
Power unit runs continually	Switch is stuck in the on position	Tap on switch case to release
		switch. If it will not release immediately, disconnect power
		cable from battery or damage
		could result
Probe settles donward when	Damaged cylinder seals	Replace seals
not in use		
	Check valve stuck open	Remove and clean check valve



# 2450 MOUNT ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
1	1040462	WLDMT-CHANNEL	1
2	1040465	WLDMT - PIVOT BRACKET	1
3	1040591	WLDMT 42" CYL ANCHOR TUBE	1
4	1040464	WLDMT-SLIDE TUBE	1
5	1018198	TUBE-BRACE	2
6	1018246	WLDMT-TUBE BRACE	2
7	1030255	BRACKET	2
8	1040414	WLDMT-MOTOR MOUNT	1
9	1040577	CYLINDER-HYDRAULIC 42"	1
9 10	1023629	ROD-REDI	1
10	1023029	RUBBER MOUNT ASSEMBLY	3
12	1030293	TEE-HANDLE	2
12	1011605	BOLT-HEX: .50 X 1.00 NC GR5 ZP	4
13	1011581	WASHER-LOCK: .50 ZP	4
14	10114443	WASHER-LOCK50 ZP WASHER-FLAT: .50 ZP	4
		NUT-HEX: .50 NC GR2 ZP	2
16	1011097		2 1
17	1011600	BOLT-HEX: .38 X 1.00 NC GR5 ZP	
18	1040588	COVER 42" CYL	1
19	1040549	COVER - POWER PACK	1
20	1040418		1
21	1013024	WASHER-FLAT: .63 ZP	2
22	1013302	NUT-NYLOCK: .63 NC GR2 ZP	1
23	1040551	WLDMT-MOUNTING BRACKET	1
24	1021195		1
25	53687	PIN-HAIR: .14 X 1.94 ZP	1
26	1040467	TRANSPORT LOCK	1
27	1018002	FTG-ELBOW 1501-4-4	4
28	1011599	BOLT-HEX: .38 X .75 NC GR5 ZP	1
29	1011602	BOLT-HEX: .38 X 1.50 NC GR5 ZP	1
30	1015174	BOLT-HEX: .38 X 2.50 NC GR5 ZP	1
31	1018889	TURNBUCKLE EYE TO EYE	1
32	1018252	WLDMT-CLEVIS	1
33	1013519	NUT-JAM: .38 NC GR2 ZP	4
34	1018183	ROD - THREADED	1
35	1031486	PLATE ZP	1
36	1011603	BOLT-HEX: .38 X 1.75 NC GR5 ZP	2
37	1016999	NUT-TOPLOCK: .38 NC GR5 ZP	4
38	1060085	CHAIN-LINK: .188 X 9.000	1
39	1040592	HOSE: .25 X 109.5 4NPTM/4NPTM B5	1
40	1040593	HOSE: .25 X 62.5 4NPTW4NPTM B4	1
41	1013242	WASHER-LOCK: .25 ZP	2
42	1011595	BOLT-HEX: .25 X .75 NC GR5	2
43	1016999	NUT-TOPLOCK: .38 NC GR5 ZP	10
44	1011586	WASHER-LOCK: .38 ZP	1
45	1011576	NUT-HEX: .38 NC GR2 ZP	1



# PROBE ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
1	1018249	WLDMT-ROD GUIDE	1
2	1018943	ROD-GUIDE	4
3	1018944	SPRING	4
4	1025604	WLDMT-PROBE GUIDE	1
5	1018244	BUSHING	2
6	1011097	NUT-HEX: .50 NC GR2 ZP	8
7	1011584	WASHER-FLAT: SAE .50 ZP	4
8	1018247	WLDMT-SCRAPER MOUNT	1
9	1018240	SCRAPER	1
10	1031407	WLDMT-PROBE	1
11	1030206	TIP, C#1 WET	1
	1040969	TIP, C#1 DRY	
12	1011601	BOLT-HEX: .38 X 1.25 NC GR5 ZP	1
13	1018259	SPRING	4
14	1013519	NUT-JAM: .38 NC GR2 ZP	3
15	1014124	BOLT-HEX: .31 X 1.50 NC GR5 ZP	1
16	1011600	BOLT-HEX: .38 X 1.00 NC GR5 ZP	2



# DUAL ZONE PROBE ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
1	1018249	WLDMT-ROD GUIDE	1
2	1018943	ROD-GUIDE	4
3	1018944	SPRING	4
4	1060050	BUSHING-DUAL ZONE	2
5	1011097	NUT-HEX: .50 NC GR2 ZP	8
6	1014443	WASHER-FLAT: .50 ZP	4
7	1018240	SCRAPER	1
8	1031407	WLDMT-PROBE	1
9	1030206	TIP	1
10	1011600	BOLT-HEX: .38 X 1.00 NC GR5 ZP	2
11	1018259	SPRING (MODIFICATION)	1
12	1016999	NUT-TOPLOCK: .38 NC GR5 ZP	3
13	1014124	BOLT-HEX: .31 X 1.50 NC GR5 ZP	1
14	1030700	NUT-TOPLOCK: .31 NC GR5 ZP	1
15	1040366	WLDMT - PROBE GUIDE	1
16	1040353	WLDMT - SCRAPER MOUNT	1
17	1018244	BUSHING	1
18	1040579	WLDMT-TRIGGER TUBE 42" CYL	1
19	1060231	PIN-CLEVIS: .38 X 2 ZP	1
20	1016660	BOLT-HEX: .50 X 5.50 NC GR5 ZP	2
21	1011577	NUT-HEX: .50 NC ZP	2
22	53687	PIN-HAIR: .14 X 1.94 ZP	1



# AIRBLAST TIP CLEANER

ITEM	PART NO.	DESCRIPTION	QTY
1	1040221	WLDMT-HOLDER ZP	1
2	1011583	WASHER-FLAT: .31 ZP	1
3	1030700	NUT-TOPLOCK: .31 NC GR5 ZP	1
4	1040254	WLDMT-ROD GUIDE	1
5	1040255	WLDMT-ACTUATOR TUBE	1
6	1040261	WLDMT-AIR INJECTOR ARM	1
7	1040492	WLDMT - SEAL BASE ZP	1
8	1040168	WLDMT-AIR TANK	1
9	1040213	BOLT-ADJUSTMENT	1
10	1040471	.50 COLLAR	2
11	1040470	WLDMT - SHIELD MT.	1
12	1040216	WASHER-RUBBER	1
13	1040473	SPRING-4"	1
14	1014443	WASHER-FLAT: .50 ZP	1
15	1011576	NUT-HEX: .38 NC GR2 ZP	1
16	1011600	BOLT-HEX: .38 X 1.00 NC GR5 ZP	1
17	1015058	ELBOW-STREET	2
18	1013423	BOLT-HEX: .25 X 1.00 NC GR5	4
19	1030946	NUT-TOPLOCK: .25 NC GR5 ZP	4
20	1040478	.38 FLEX HOSE .25 MALE ENDS	1
21	1040474	SPRING-3"	1
22	1040308	CONNECTOR: .50 NM	2
22	1028910	FTG NIPPLE 5404-4-4	2
23	1040486	AIR PUMP C6	1
24	1040488	OILER C2	1
25	1040479	DRAIN COCK: .25 - C9	1
26	1040480	BALL VALVE: .25 - C8	1
27	1040487	PRESSURE SWITCH - C2	1
		PLUG	1
28	1040481	GAUGE-PRESSURE: 1/4"MP - C6	1
29	1040308	CONNECTOR: 1/2 " NM	2
30	1011591	NUT-JAM: .50 NC GR2 ZP	1
31	1040472	AIR VALVE - C2	1
32	1040476	FTG. 90, 1/4"" TUBE	1
33	1040483	FTG STRAIGHT, 1/4" TUBE	1
34	1011200	1/4"" TUBE X 1/8"" PIPE 90°	1



# BUCKET ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
1	1040552	WLDMT - BUCKET STANDARD	1
2	1040361	HANDLE LATCH	1
3	1025601	PIN-ROLL	2
4	1011828	WASHER-FLAT .38 ZP	4
5	1011596	BOLT-HEX: .31 X .50 NC GR5 ZP	2
6	1030700	NUT-TOPLOCK: .31 NC GR5 ZP	2
7	1025603	SPRING-COMPRESSION	2



# DUAL ZONE BUCKET ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
1	1040364	WLDMT - BUCKET	1
2	1040357	WLDMT - HINGE PLATE	1
3	1040361	HANDLE LATCH	1
4	1013243	BOLT-HEX: .25 X .50 NC GR5	5
5	1030946	NUT-TOPLOCK: .25 NC GR5 ZP	5
6	1025601	PIN-ROLL	2
7	1014608	WASHER-FLT: SAE .38 ZP	2
8	1025603	SPRING-COMPRESSION	2
9	1011596	BOLT-HEX: .31 X .50 NC GR5 ZP	2
10	1030700	NUT-TOPLOCK: .31 NC GR5 ZP	2
11	1040494	CONNECTOR LINK	1
12	1040495	WLDMT - ADJUSTMENT SCREW	1
13	1029720	SOLENOID	1
14	1029194	SMALL LINE CLAMP	1
15	1040493	SPRING-DUAL ZONE	1
16	1040496	HARNESS (NOT SHOWN)	1