
Farmer Model

The Tru-Test Farmer Model is sometimes referred to as the Dairy Farm Model. Both 68-pound and 102-pound capacity models are available for the DHIA System.

All 102-pound models and newer 68-pound models have a double gallery inner valve (two slanted tubes within the valve cylinder).

Double gallery inner valves must be used on models that have both a sampling port and an air admission port on the bottom of the valve assembly. A single gallery inner valve must be used on models which have only a sampling port. Care must be taken not to interchange inner valves during cleaning or disassembly. Proper operation of the valve settings is addressed later in this section.

■ Installation

In all cases, the meter should be mounted as close to vertical as possible (within five degrees *does not* affect accuracy). The meter should be located as close as possible to the milk line. All milk hoses from the claw/cluster to the meter and from the meter to the milk line should be kept to a minimum to avoid

sagging and possible milk yield errors.

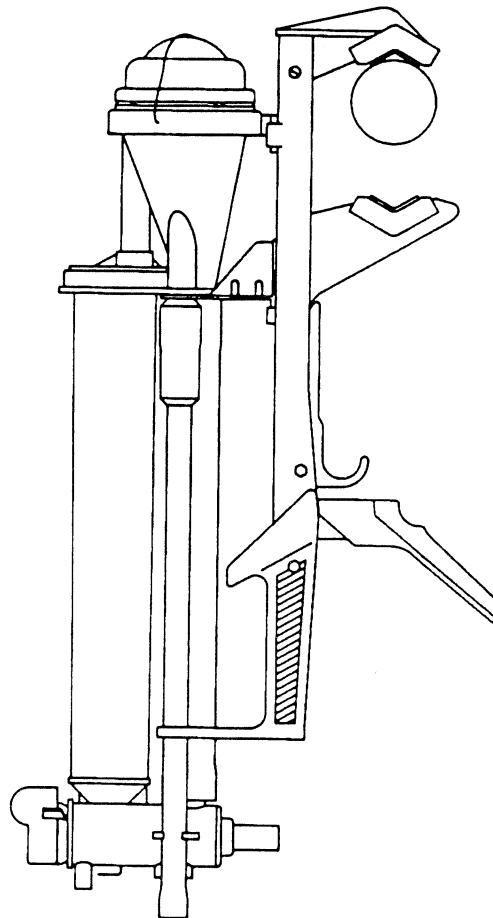
■ Operation

Mount the meter so that the inlet tube is as near to vertical as possible (within

five degrees). Connect the hose coming from the milker claw to the meter inlet tube. Connect the hose from the meter outlet to the milk line.

It's important the meter forms an air tight seal when vacuum is applied. •••

Tru-Test Farmer Model



■ Connection of Hoses

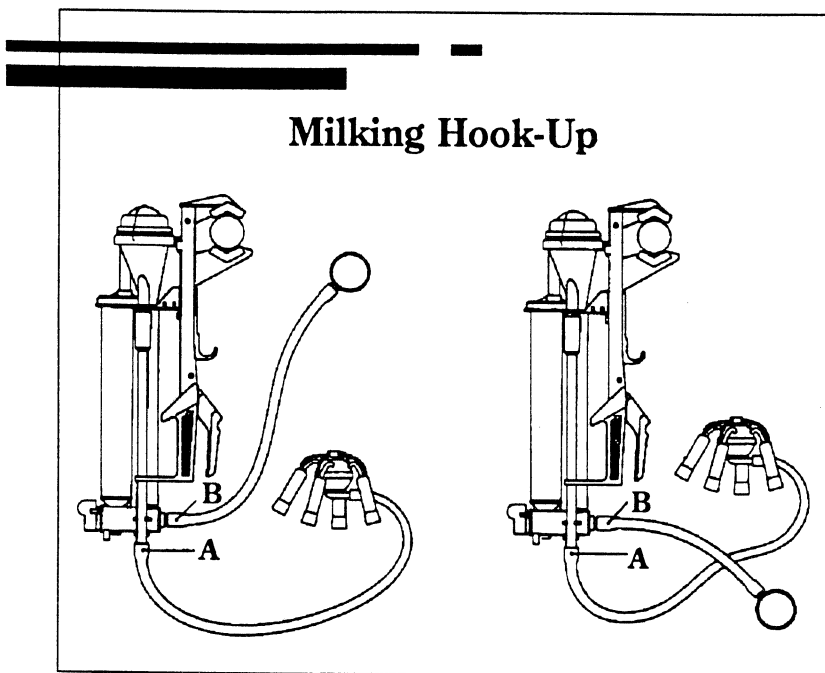


Figure 1

Figure 1: Attach a milk hose from the claw/cluster to the milk meter inlet tube (A). A second milk hose should be attached from the milk meter outlet (B) to the milk line.

If an automatic take-off unit or variable claw/cluster vacuum level controller is used, the meter should be mounted between the controller and the milk line. •••

■ Taking a Milk Sample

Place the valve indicator at the 12 o'clock position marked "M" and insert the stopper in the air admission port. Be sure there are no air leaks by checking the air admission valve and the junction between the meter body and the flask. Also be certain that the inner valve is pushed as far to the back of the valve housing as the thin portion of the valve collar allows.

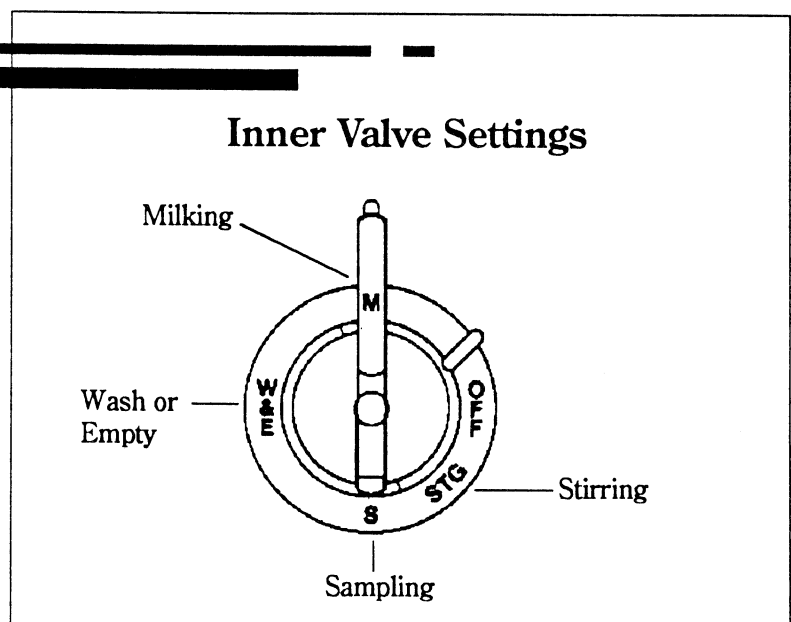
1. For milking, turn the large end of the valve handle to the "M" position (12 o'clock).

2. As each cow finishes milking, record the milk weight reading and rotate the valve to the 5 o'clock "STG" position. This allows air to

bubble through the milk and mix the sample in the flask. Agitate one second per two pounds of milk. (Remember: insufficient agitation will re-

sult in an inaccurate sample for component analysis.

3. Once the milk has been properly mixed, place the sample vial under the



■ Taking a Milk Sample (continued)

sampling port and turn the valve to the 6 o'clock or "S" position. This allows milk to flow out the sampling port.

4. Once a sample has been taken, turn the valve to the 9 o'clock or "W & E" position. This will empty the remain-

5. When the flask is completely empty, return the valve to the "M" position and replace the sampling port stopper and the air admission port stopper. The meter is now ready to sample the next cow.

Note: In turning the valve,

avoid holding the handle and the white top of the valve collar together at the same time. Doing so will loosen the valve and cause air to leak and thus increasing foaming. •••

■ Cleaning the Farmer Model

Reverse the hoses for cleaning.

When washing meters in place, it will be necessary to add water and washing compound to the milking system. (One flask of water per meter in the milking system is usually a good rule of thumb).

Remove valve, replace with flapper, put port stoppers in place.

If milk has been drawn off through the sampling port, the rubber plug in the sampler port must be removed and washed by hand. The port should be brushed prior to

washing the meter.

At least once a week, disassemble the valve and manually wash the components using a brush in the gallery holes only.

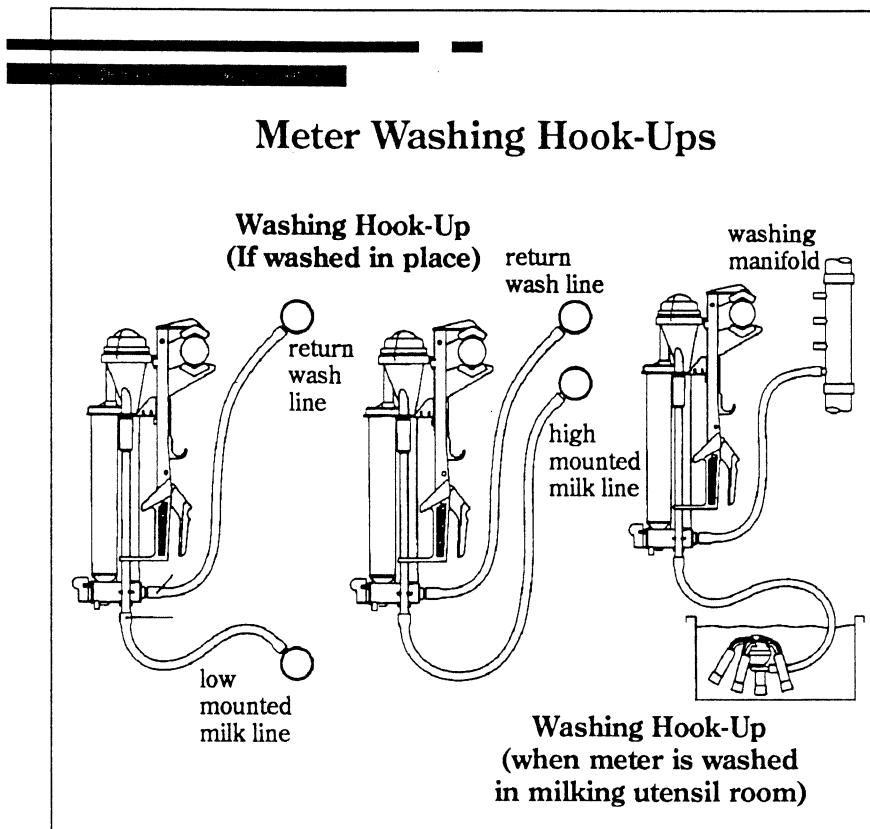
After air drying, apply a small amount of Petro-Gel to the "o" ring only. This will allow your valves to turn easier.

It will also be necessary from time to time to remove the cap and flask from the body to clean the "o" rings. This must be done with great care.

The cap point is the key part of the meter and, if damaged, will affect the accuracy.

Never let the cap float in water. Remember: no brushing on any inside part of the body and no brushing on the outside of the meter either.

Keep meters as a unit and **do not** interchange any parts. •••



■ Troubleshooting

A guide to troubleshooting symptoms

Symptom

Solution

Abnormal Reading

- | | |
|---|---------------------------------------|
| ■ Meter more than 5 degrees from vertical | ■ Reposition to vertical |
| ■ Flask sealing ring leaking air | ■ Replace |
| ■ Defective Valve | ■ Replace sealing rings or repair |
| ■ Insufficient vacuum | ■ Check with milking equipment dealer |
| ■ Dirty meter | ■ Remove from service and clean |
| ■ Air vent in cluster/claw plugged | ■ Clean air vent |
| ■ Cracked cap or body | ■ Replace part |
| ■ Cap deflector point damaged or blunt | ■ Replace part |
| ■ Cracked flask | ■ Replace part |
| ■ Partially plugged/obstructed nozzle | ■ Remove obstruction |
| ■ Damaged nozzle | ■ Replace part and recalibrate |

Flask Filling Too Fast

- | | |
|--|---|
| ■ Hoses reversed | ■ Reverse hose, milker to meter inlet tube |
| ■ Wrong nozzle used | ■ Use proper size nozzle |
| ■ Damaged cap or metering nozzle | ■ Send in for repair or replace part |
| ■ Milking systems that do not use air to transport milk from milking machine/claw to milk line | ■ Must use air vent between meter and mechanical device milker. |

No Sample in Flask

- | | |
|---|---|
| ■ Hoses not connected | ■ Connect tightly |
| ■ Flask sealing ring in meter body pinched or missing | ■ Replace sealing ring and reset properly |
| ■ Damaged flask | ■ Check sealing edge/replace or repair |
| ■ Cracked or broken cap or meter body | ■ Replace |
| ■ Meter nozzle plugged | ■ Carefully clean obstruction or nozzle |
| ■ Damaged valve leaking air | ■ Try another valve/if persists, get repaired |
| ■ Valve not in "M" position | ■ Turn valve to "M" position |
| ■ Air admission flap open | ■ Shut air admission flap |

Mounting Brackets

There are two main types of mounting systems for Tru-Test meters—clamp brackets and tube brackets. There are variations of each of these which may differ somewhat than those pictured here.

The principle difference between the two types of brackets is the tube bracket requires the installation of a permanent receptacle to the dairy producer's equipment at each point where a meter is to be located. (See clamp block figure on page 19).

The clamp bracket can be attached and removed as needed to horizontal pipes like vacuum or milk lines.

■ Assembly

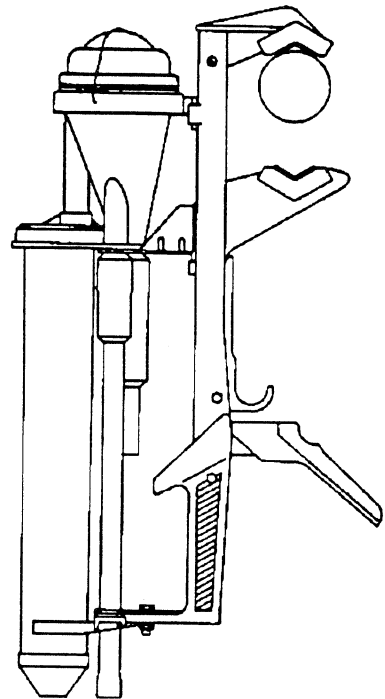
Disassembling and reassembling the clamp bracket can be easy if these steps are followed carefully.

Remove in order:

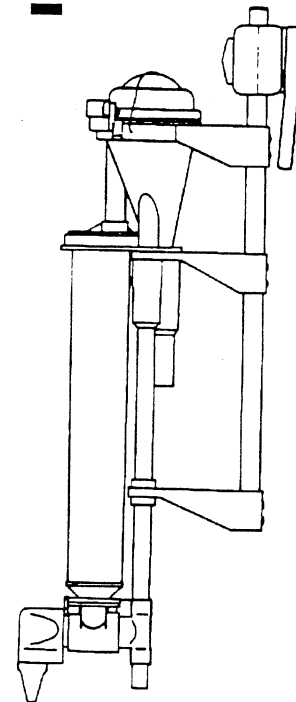
- handle bolt
- handle
- ratchet return spring
- trigger assembly (hold trigger in place and insert trigger pin set (#26095) pushing out trigger pivot pin (#26091).
- ratchet

To reassemble, reverse the order of the above steps.

Clamp Bracket



Tube Bracket



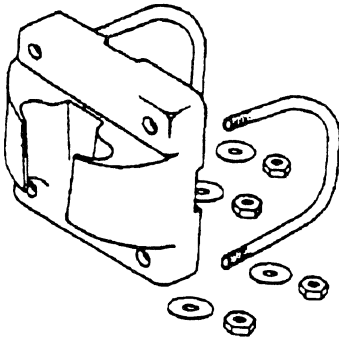
■ Maintenance

Avoid getting the inside of the clamp bracket channel wet. The outside of the clamp bracket assembly may be wiped off with a damp, soapy cloth.

If the inside of the channel gets wet, place the clamp bracket where it can dry out. Relubricate before using again.

Oil clamp bracket at least once a week. To lubricate, use a light machine grade oil and place a small amount of oil at the points indicated in Figure 4 (right).•••

Clamp Block



Key Lubrication Points for Clamp Bracket

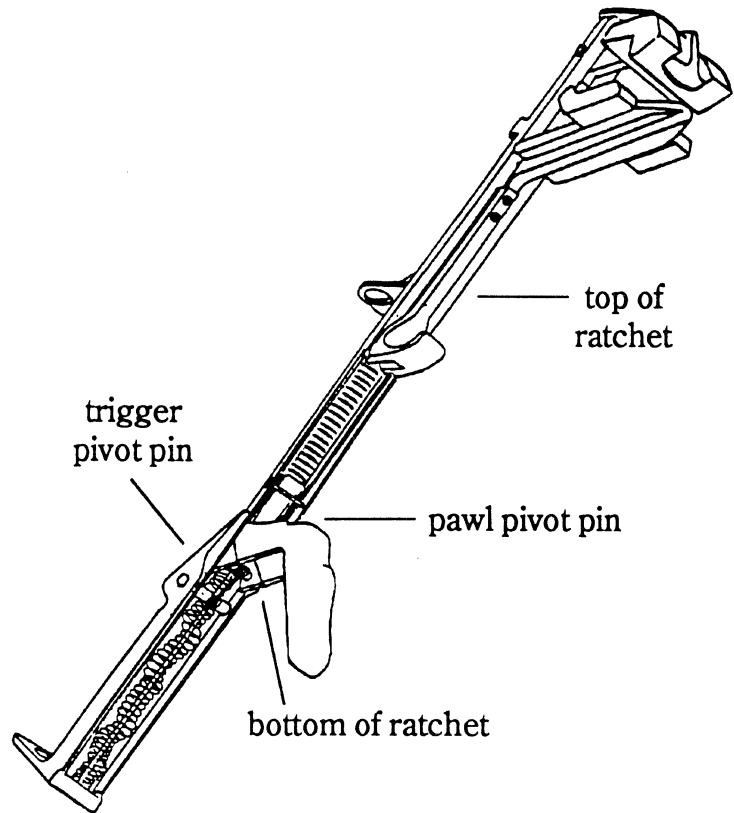
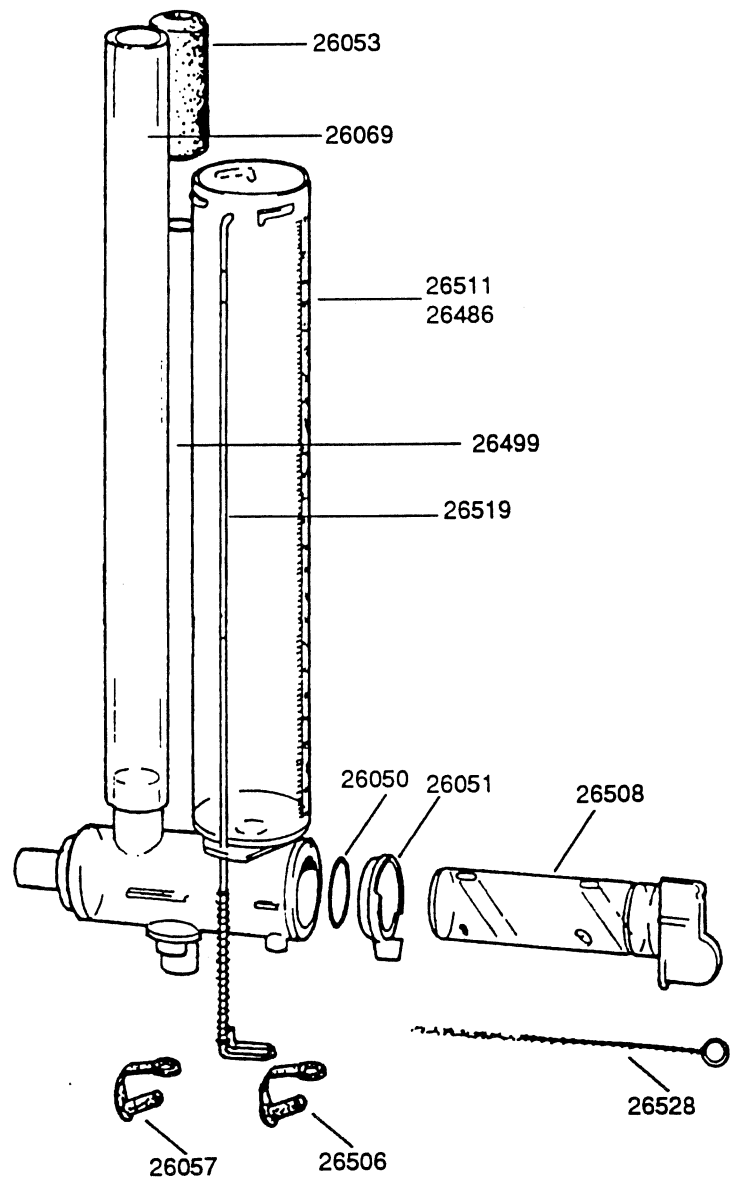
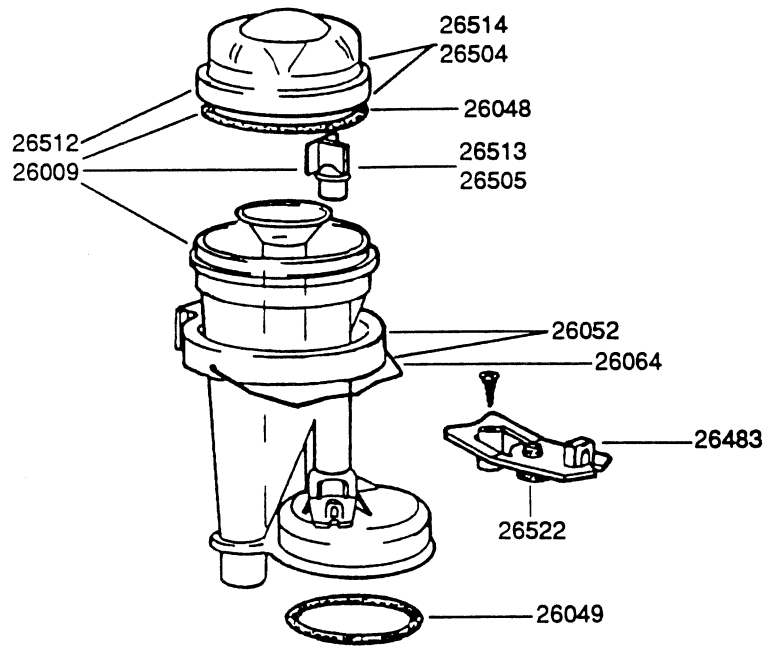


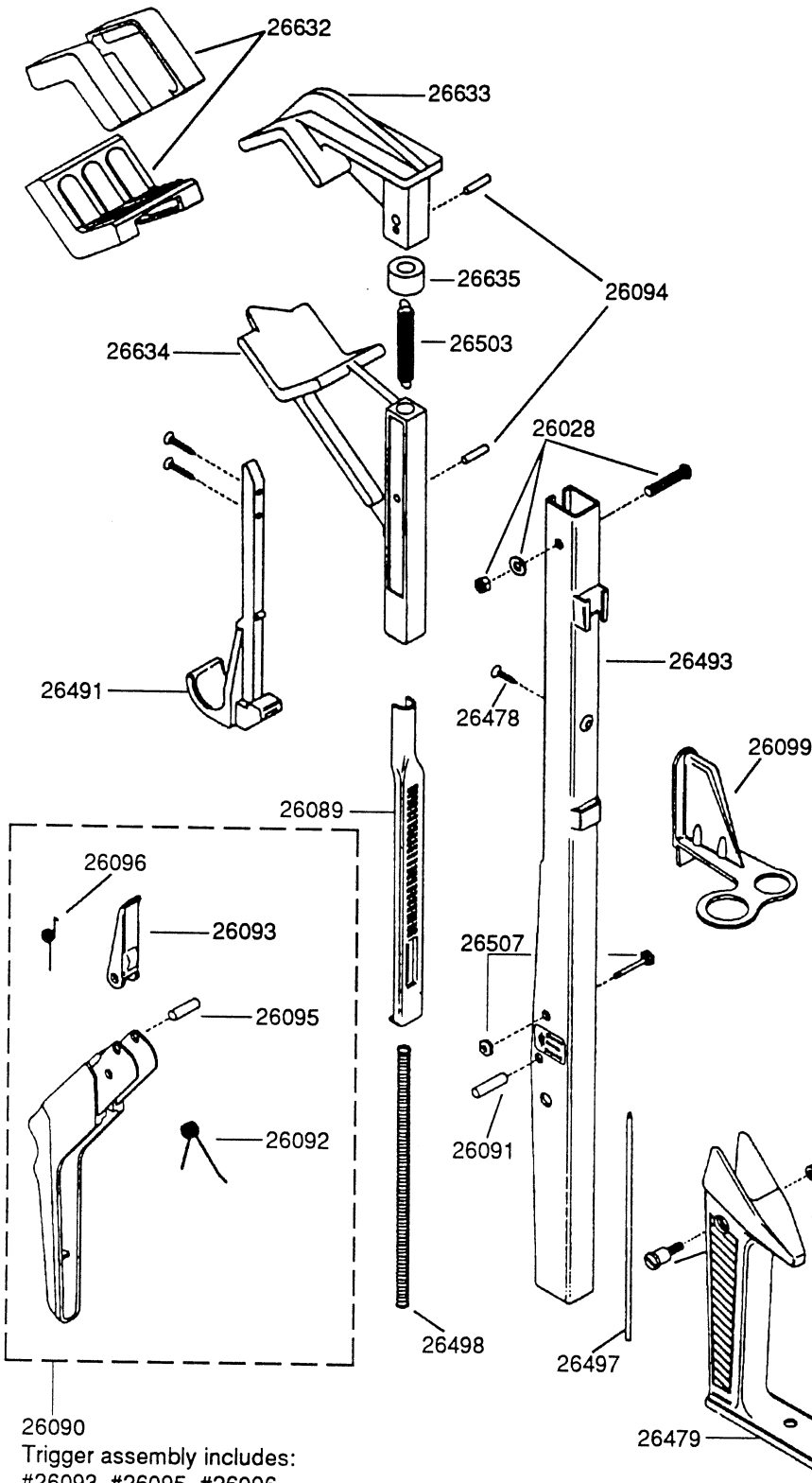
Figure 4: Oil everything on the channel from the lower jaw and down.

F Model

Part No.	Part Description
26009	body w/ cover, nozzle & seal ring (68#)
26048	body to cover seal ring
26049	flask-to-body flask ring
26050	valve inner seal ring--Farmer
26051	valve collar--Farmer
26052	mounting ring--white nylon with cover clip (interchangeable w/ #26539)
26053	rubber inlet tube--9/16" x 2.5"
26057	sample port stopper--short
26064	body cover clip
26069	3/4" milk hose--call for pricing
26483	air admission flap--white nylon
26486	flask--Farmer Model (68 lb.)
26499	SS inlet tube--9/16" x 16"
26504	cover--white top (68 lb.)
26505	nozzle (68 lb.)--winged
26506	sample port stopper--long
26508	inner valve w/ O-ring & collar for Farmer Model (includes #26050 and #26051)
26511	flask & valve assembly for Farmer Model (102 lb.)
26512	body w/ nozzle & cap (102 lb.)
26513	nozzle (102 lb.)--green
26514	cover--black top--(102 lb.)
26519	lift rod for air admission
26522	rubber disc for air admission and flask fork
26528	brush for cleaning valve--(8 x 60 mm)



Clamp Bracket



26090
Trigger assembly includes:
#26093, #26095, #26096,
and #26091 (not shown).

Part No.	Part Description
26028	bolt for upper jaw
26089	ratchet
26090	trigger assembly
26091	trigger keeper pin
26092	trigger return spring
26093	pawl assembly
26095	pawl rivot pin
26096	pawl return spring
26099	mounting stay--black plastic
26478	screw for mounting stay screw
26479	handle assembly
26480	handle bolt
26491	jaw hook--kit
26493	u-channel meter frame
26497	ratchet guide pin--see #26097
26498	ratchet return spring--see #26098
26503	clamp spring--ratchet-to-jaw
26507	channel bolt for jaw hook catch
26632	jaw cover for wide metal jaws
26633	upper jaw w/pad--wide metal
26634	lower jaw w/pad--wide metal
26635	rubber stop for aluminum jaw

Retrofit aluminum jaw kit (which is #26638) includes:

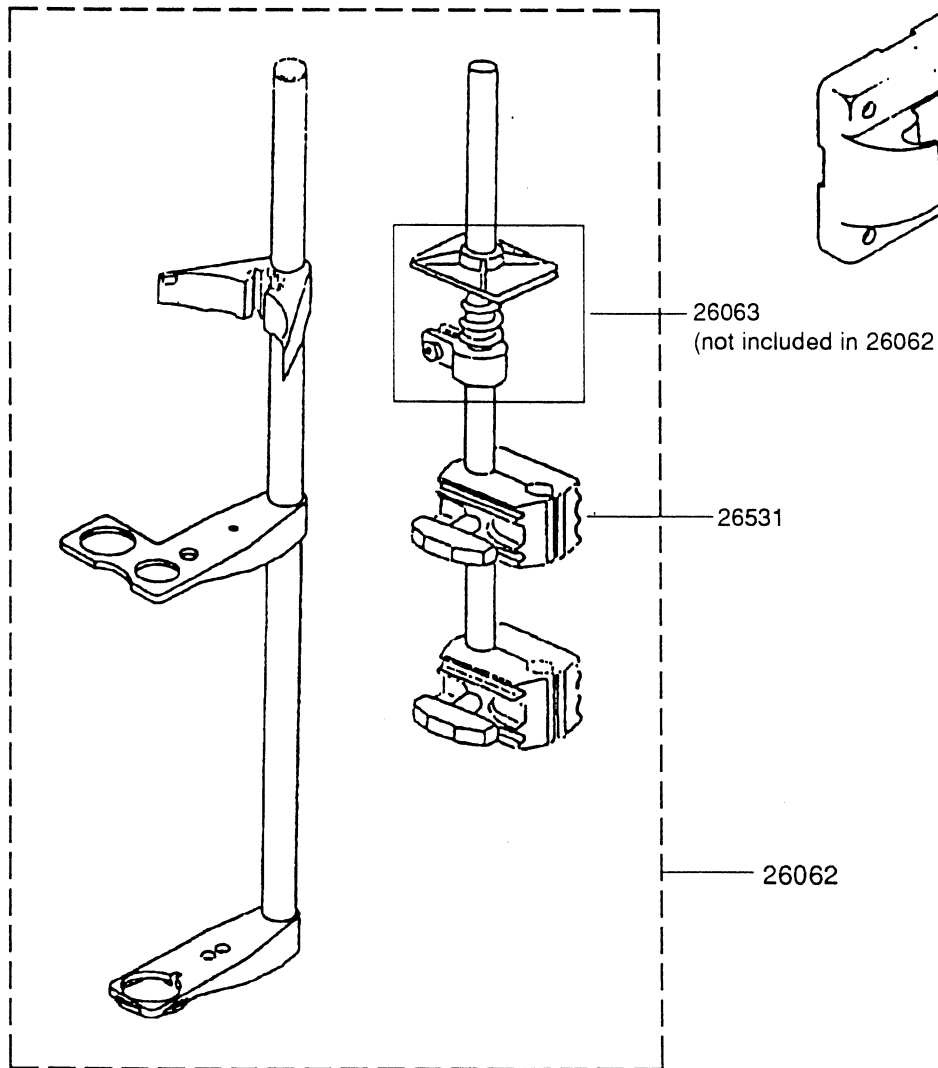
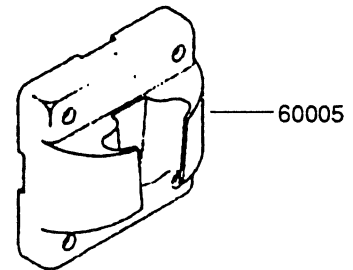
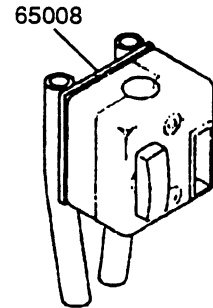
#26089, #26093, #26094, #26096,
#26491, #26503, #26633, #26634,
and #26635.

Extendible Tube Bracket

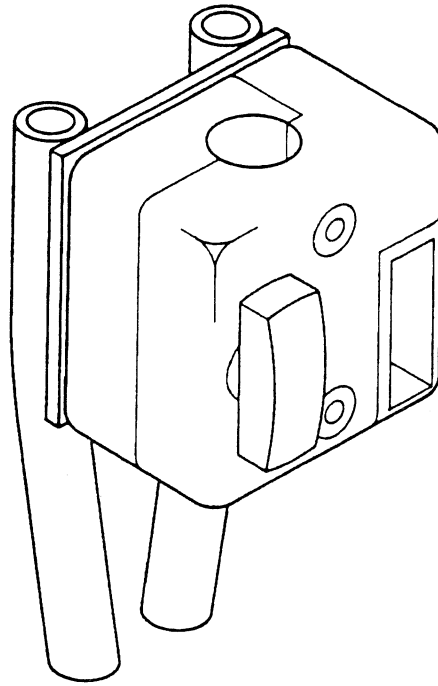
Part No.	Part Description
26062	extended tube bracket
26063	clamp spring unit
26531	tube clamp for extendible bracket
60005	V-bracket--plastic Order u-bolts #60007

If ordering from Northeast DHIA:
 V-bracket #CHP-2
 U-bolts #UBN

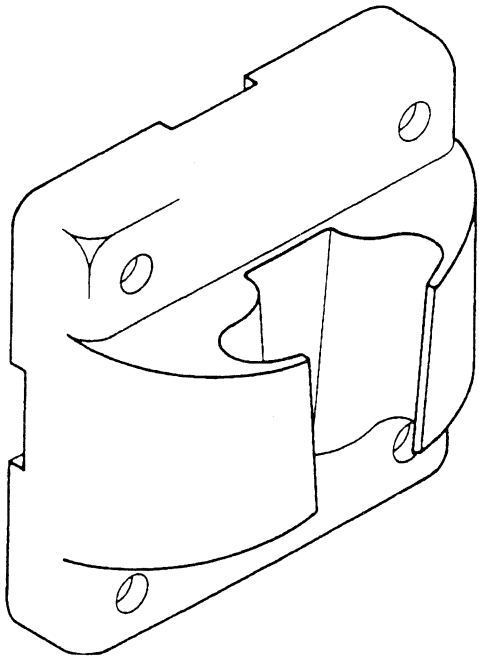
65008	clamp block w/ v-bracket (male)
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Clamp Block & V-Bracket



65008
Clamp Block w/ V-Bracket
(Male)



60005
V-Bracket--Plastic
Order U-Bolts # 60007

Ratchet, Pawl & Trigger Kit

26482 consists of:

Part No.	Part Description
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26089	ratchet
26090	trigger assembly
26092	trigger return spring

26093	pawl assembly
26095	pawl rivot pin
26096	pawl return spring

