Pull-Out Meter

The Tru-Test Pull-Out Meter is also known as the HT model or Herd Tester model. This meter is ideal for stanchion barns and has removeable flasks for remote reading and sampling.

■ Installation

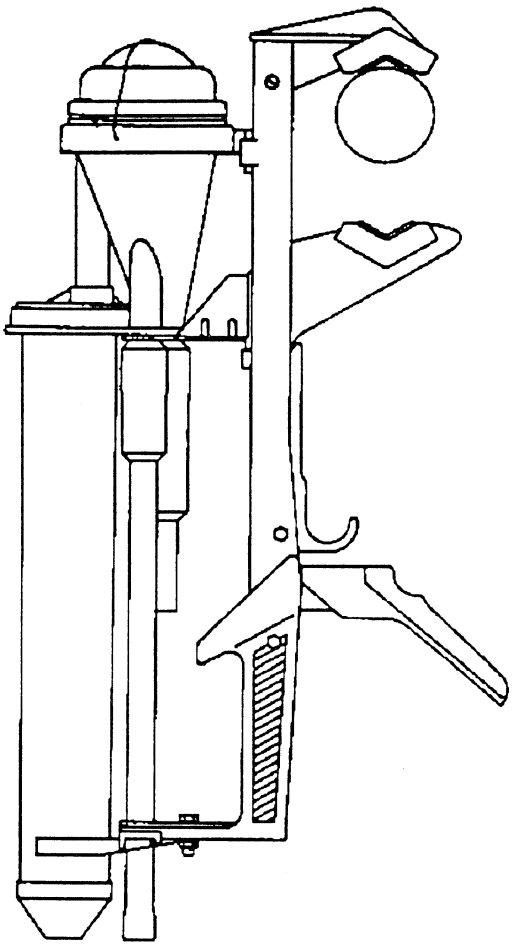
In all situations, the meter should be mounted as close to vertical as possible (within five degrees does not affect its accuracy). Place the meter as close as possible to the milk line.

■ Operation

During milking the milk flows up the meter inlet tube onto the meter cover where the milk spreads evenly and an exact proportion passes through a nozzle and from there travels to the calibrated flask. The rest of the milk flows through the milk meter outlet and to the milk line.

As each cow finishes milking, remove the flask by pulling the lower end out of the support fork and freeing the top from the meter. As this happens, a shut off valve (or VSO) closes the metering outlet to prevent vacuum loss. Replace with an empty flask by putting upper lip of flask back against inside of the VSO and then snap flask back into the support fork.

Tru-Test Pull-Out Model



To record the milk weight, hold the flask so it is vertical and the milk line is at eye level. If a flask hanger is supplied, hang the flask from the milk pipe.

Be careful to read the milk line, NOT the foam line.

For a composite sample, invert the flask at least two or three times before taking your sample.• • •

■ Connection of Hoses

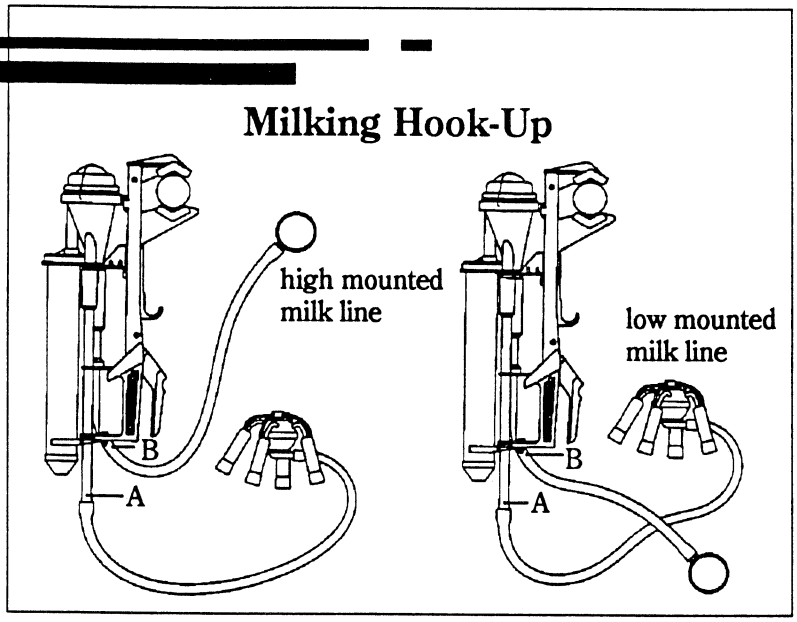
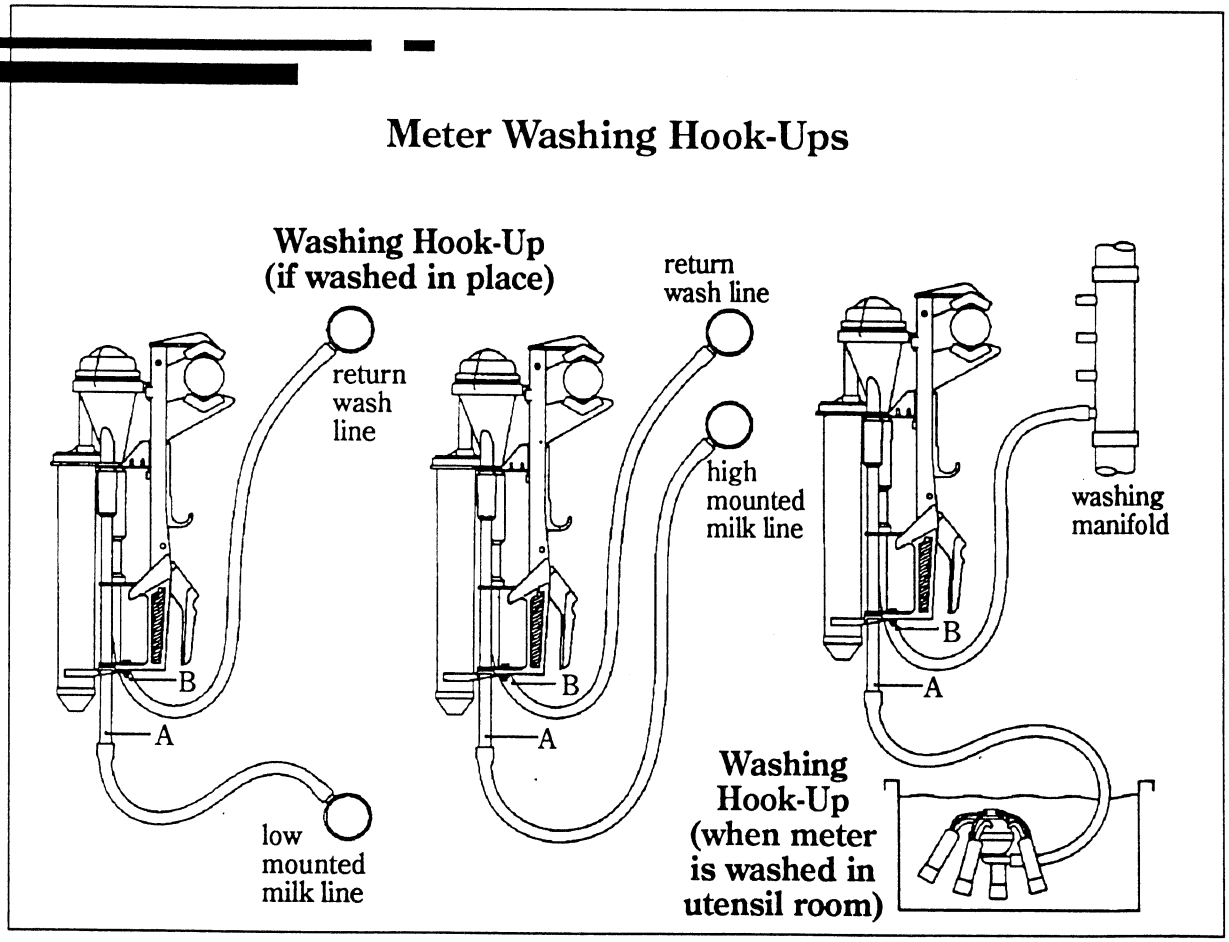


Figure 3

Figure 3: Attach a milk hose from the claw to the milk meter inlet tube (A). A further milk hose should be attached from the milk meter outlet (B) to the milk line.

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

■ Cleaning the Pull-Out Meter



■ Cleaning the Pull-Out Meter (continued)

When cleaning in place, reverse the hoses so the detergent solution flows through the meter in the opposite direction as the milk. Flasks and sealing rings will require handwashing after the meter has been cleaned.

Abrasive detergents should not be used. Only brushes recommended by Tru-Test should be used on the inside of the flask.

With the Pull-Out meter, special attention needs to be given when cleaning the shut off valve (or VSO) and the area around this valve. These areas should be washed by hand with a soft rag or sponge. The flask plug also needs to be cleaned by hand. • • •

■ Troubleshooting

A guide to troubleshooting symptoms

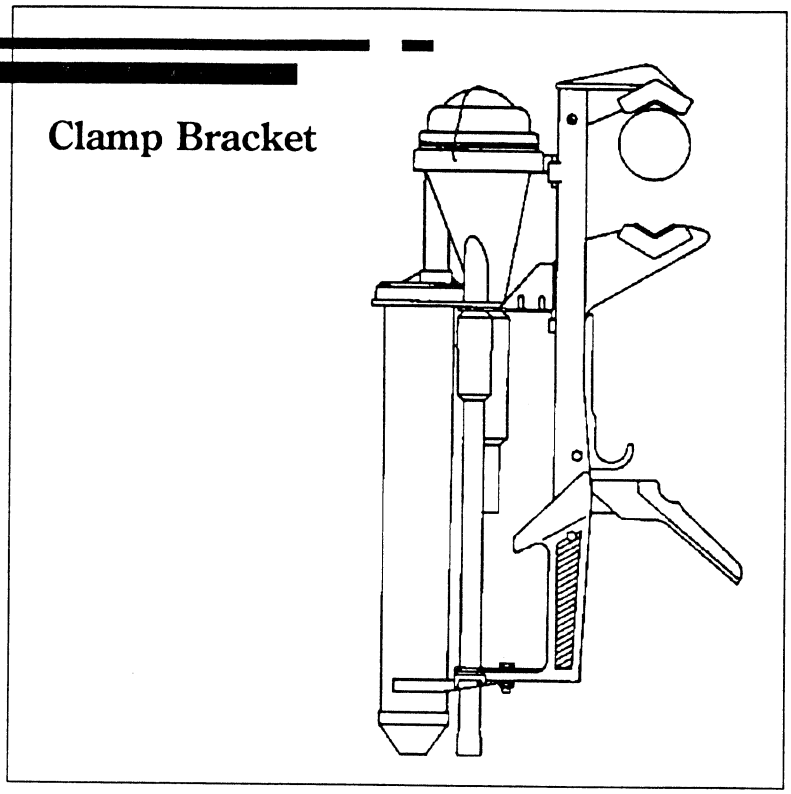
Symptom	Solution
Abnormal Reading	
■ Meter more than 5 degrees from vertical	■ Reposition to vertical
■ Flask sealing ring leaking air	■ Replace sealing ring
■ Insufficient vacuum	■ Have milking equipment dealer check
■ Dirty meter	■ Remove from service and clean
■ Air vent in claw is plugged/clogged	■ 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 & recalibrate
Flask Filling Too Fast	
■ Hoses reversed	■ Reverse hoses, milker to meter inlet tube
■ Wrong nozzle used	■ Use proper size nozzle
■ Damaged cap or metering nozzle	■ Repair/replace
No Sample in Flask	
■ Hoses not connected	■ Connect tightly
■ Rocker valve (or rubber valve if fitted) stuck in inlet hole	■ Move rocker to free it
■ 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 part
■ Meter nozzle plugged	■ Carefully clean obstruction from nozzle
■ 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.



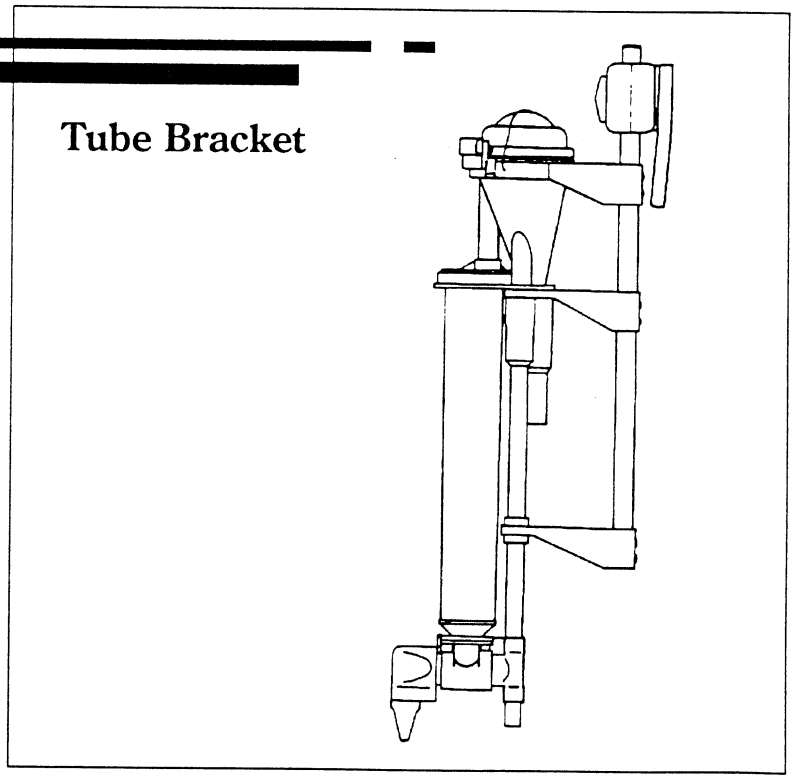
Assembly

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.



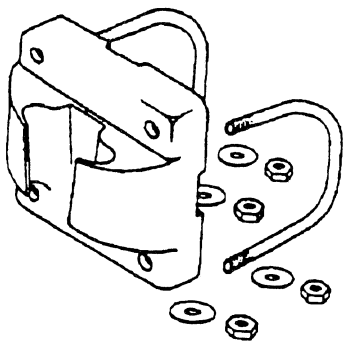
■ Maintenance

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

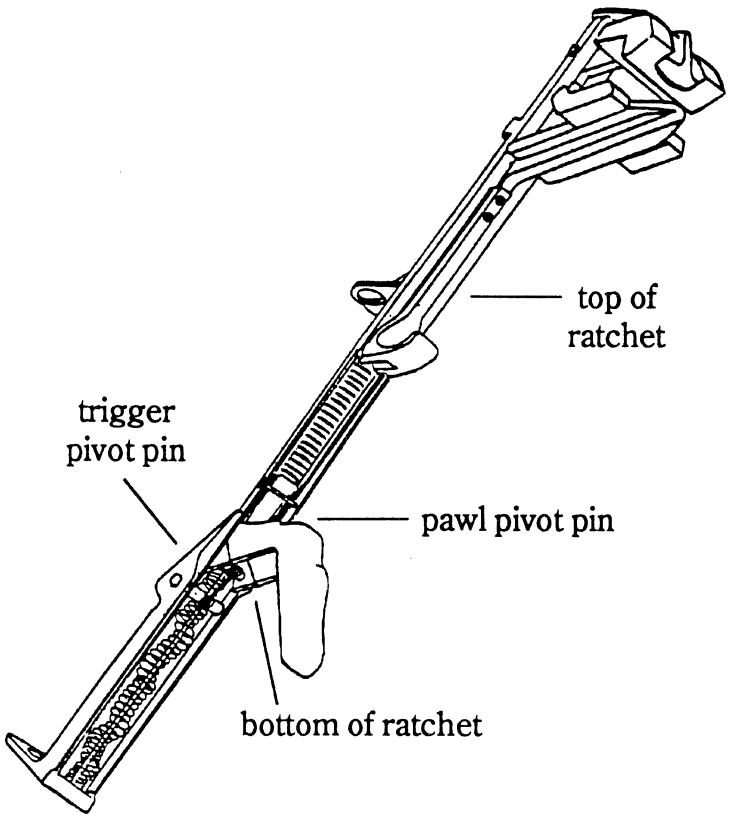
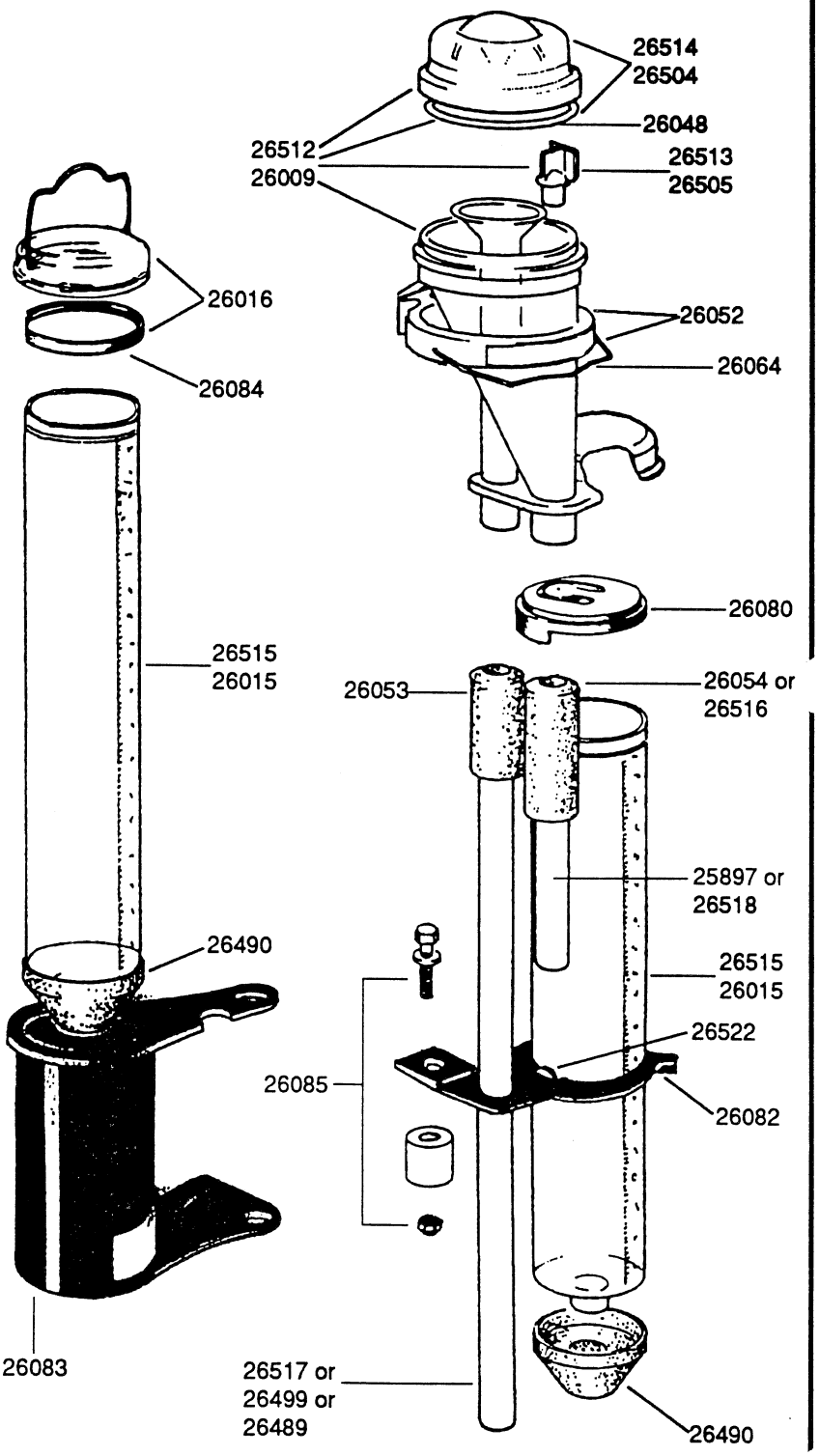


Figure 4: *Oil everything on the channel from the lower jaw and down.*

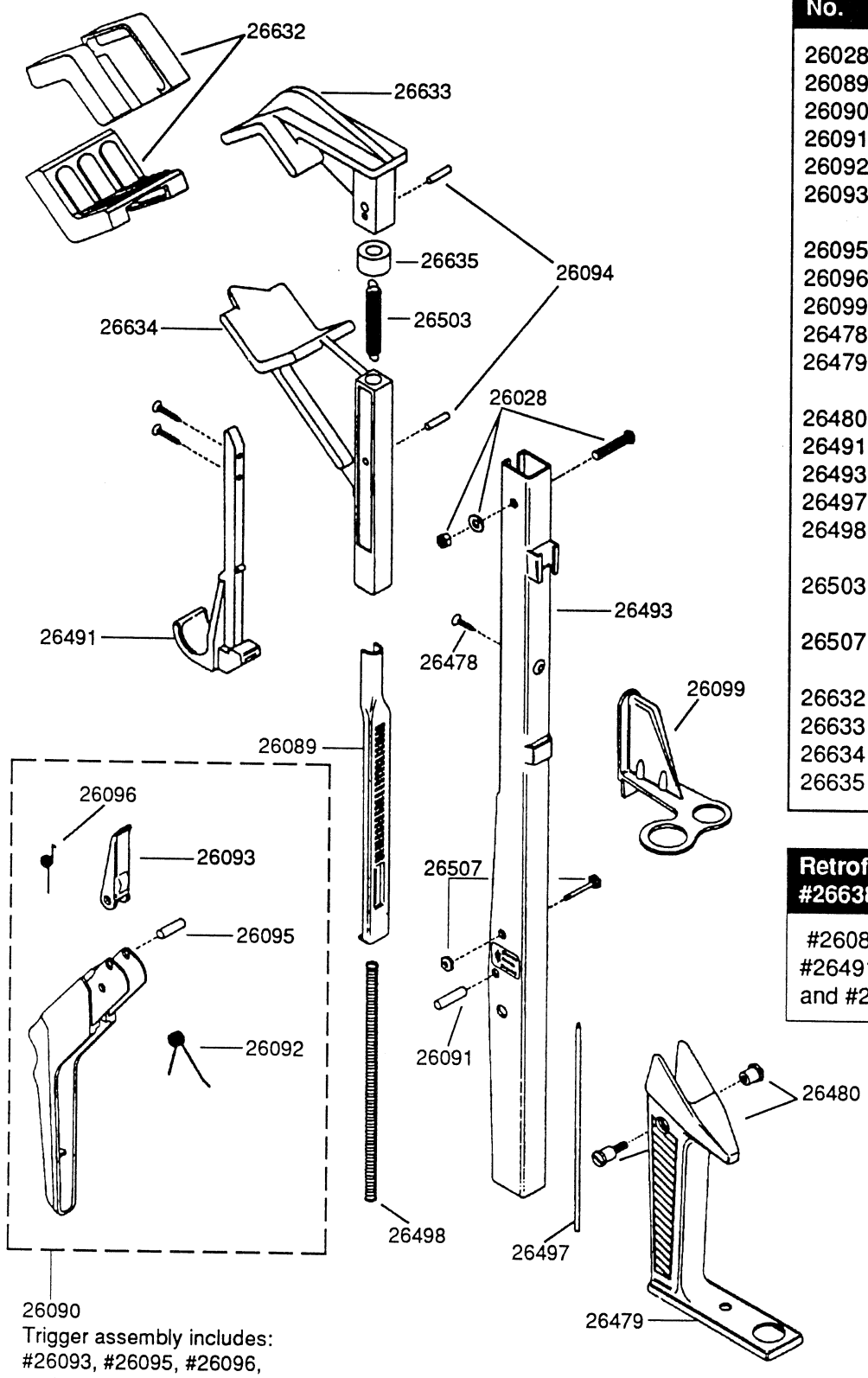
Herd Tester Model

Part No.	Part Description
25897	outlet tube--SS--10cm--(9/16" x 4") w/ rib
26009	body w/ cover, nozzle & seal (68 lb.)
26015	flask--push-in style--31 kg (68 lb.)
26016	flask holding cap w/ bail & seal
26048	body to cover seal ring
26052	mounting ring--white nylon w/cover clip
26053	inlet tube--rubber--7cm (9/16" x 2.5")
26054	outlet tube--rubber--10cm (5/8" x 4")
26064	body cover clip
26080	vacuum shutoff seal (VSO)
26082	flask fork
26083	flask holder & hardware
26084	flask seal for holding cap
26085	hardware--fork & holder
26489	SS inlet--9/16" x 14"
26490	bottom plug--Herd Tester Model
26499	SS--9/16" x 16"
26504	cover--white top--(68 lb.)
26505	nozzle--(68 lb.)--winged
26512	body w/ nozzle & cap (102 lb.)
26513	nozzle-102 lb.--green
26514	cover--black top--(102 lb.)
26515	flask--push-in style--46 kg (102 lb.)
26516	rubber outlet sleeve--5/8" x 2"
26517	inlet tube--SS--swaged--36 cm (14")
26518	SS outlet tube--3/4" x 4" (was # 26562
26522	rubber disk for air admission and flask fork



Effective February 8, 1991

Clamp Bracket



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.