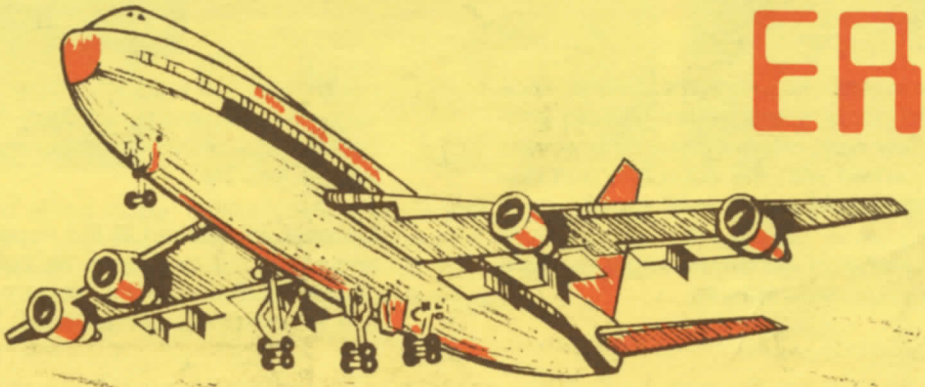
A NEW ERA

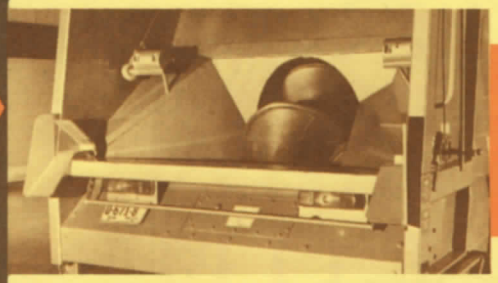


GRUNCHER

WAYNE

The surprising **GRUNCHER** introduces a New Era in refuse collection. Significant improvements in: collection speed, pay load, machine reliability, safety, maintenance, profits, and simplicity.

THE AUGER-IS THE ANSWER-HOW IT WORKS-WHAT IT MEANS



A GREATER PAYLOAD

Grunching garbage introduces a **new era** to the science and practice of solid waste management. An old principle, applied in a new way, offers outstanding advantages to those concerned with the collection and disposal of common household or industrial waste.

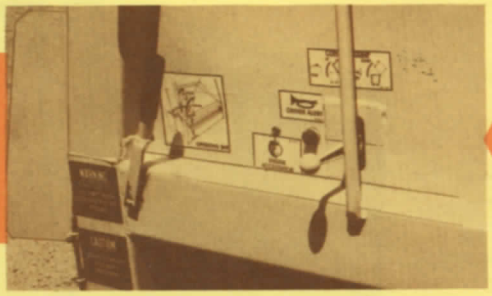
The heart of the **Gruncher** is its tapered auger — much like the auger found in a meat grinder.

Located in the loading hopper of the **Gruncher,** the auger is powered by a sturdy hydraulic motor and is constructed of high mangenese cast steel for long, trouble-free life.

Material, introduced to the hopper, is first broken, torn and shredded to reduce its bulk. The resulting small pieces of refuse are then augered into the body to produce an extremely dense mass. This is **Grunching**.

Grunching garbage results in substantial savings. Because the load is so compact, a smaller body can pick up a longer route. Savings in original cost result. The smaller body results in substantial savings in original cost, time, fuel and maintenance expense.

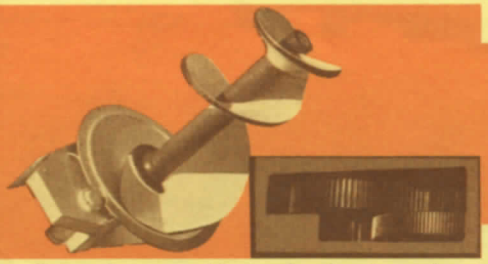
FASTER ROUTE PICKUPS



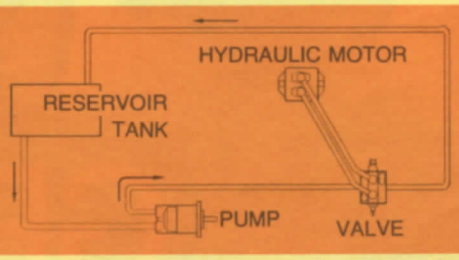
First time users are surprised at the number of "stops" that can be made in a given period of time. Non-stop or short-stop pickups are made possible by the **Gruncher** because the auger runs continuously along the route.

The **Gruncher** auger control is simplicity itself. A single lever control handle has three positions — forward, reverse and stop. Since continuous operation is normally used, the control lever is seldom used. Just "turn it on and get **Grunching**".

Faster routes mean lower costs. In addition to its ability to pick up longer routes because of its compaction capability, the **Gruncher** offers another saving through a reduction in collection time. Add it up — longer routes because of its outstanding compaction, faster routes because of its continuous operation and fewer trips to the landfill because of its loading ability. They all add up to savings, savings, savings.



REDUCED MAINTENANCE — INCREASED RELIABILITY



Gruncher machinery is simple, robust and engineered for long-life, low maintenance duty. There are surprisingly few working parts in the **Gruncher**. Like a meat grinder — the **Gruncher** is straight-forward, simple and effective. When maintenance is required, no special skills or equipment are needed. Good accessibility and simplicity of design make repair work fast and easy.

The hydraulic system of the **Gruncher** auger is outstanding for its lack of complexity. The pump provides the power — the valve controls the power — the motor uses the power. One pump — one valve — one motor. The **Gruncher** saves money in the maintenance and repair department.

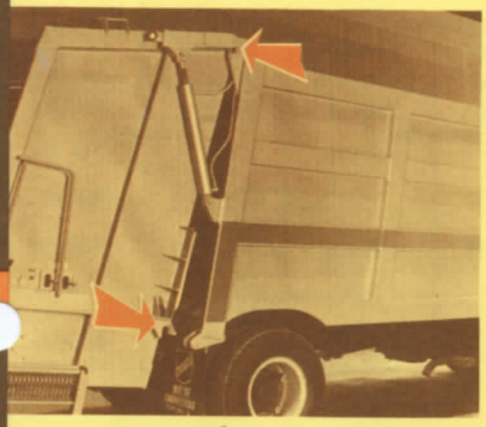
Mechanical and hydraulic expense has been designed out of the **Gruncher**. Another factor in the **Gruncher** equation — maintenance and repair savings. Lower cost, denser loads, faster pickups, lower maintenance and repair costs and better truck utilization. The **new era** is here.

ADDITIONAL IMPORTANT INFORMATION

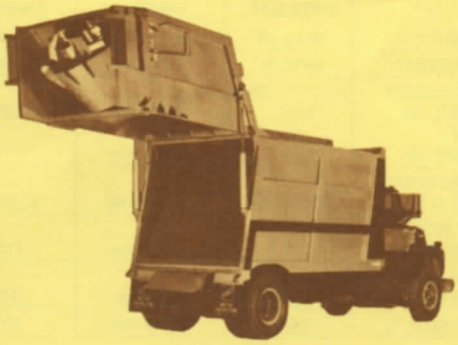
This is a view of refuse about to be collected. It is typical of common household refuse and weighs about 150 lb./cu. yd.

Here is refuse at a landfill. Note the lack of effective compaction. The material weighed about 700 lb. /cu. yd. when it was delivered to the landfill.

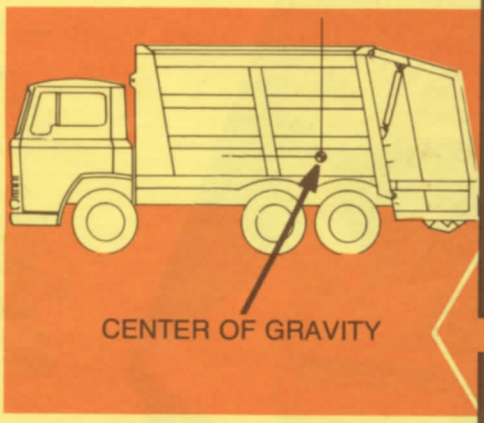
This load of refuse has been **Grunched**. In the process it has been torn, shredded, broken and squeezed an extremely dense mass for delivery to the landfill.



The **Gruncher** tailgate latches and unlatches automatically. Operating the control at the front of the truck lifts the tailgate and makes a walk to the rear to release the tailgate unnecessary.

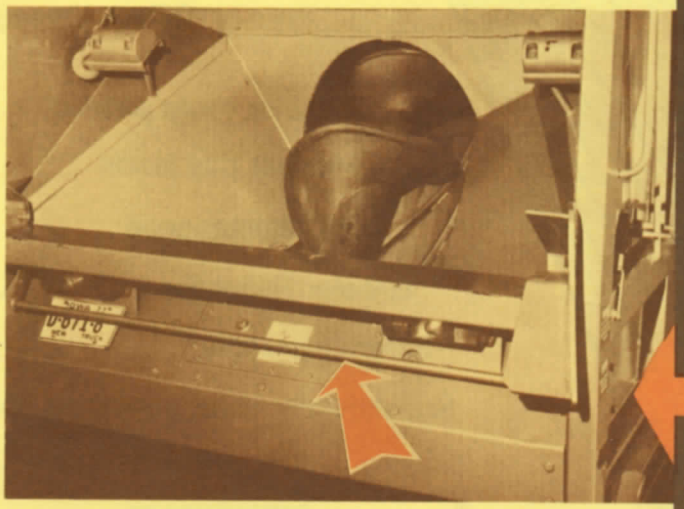


The **Gruncher** tailgate elevates completely and the clean smooth ejector blade empties the body in seconds. No time is wasted here.



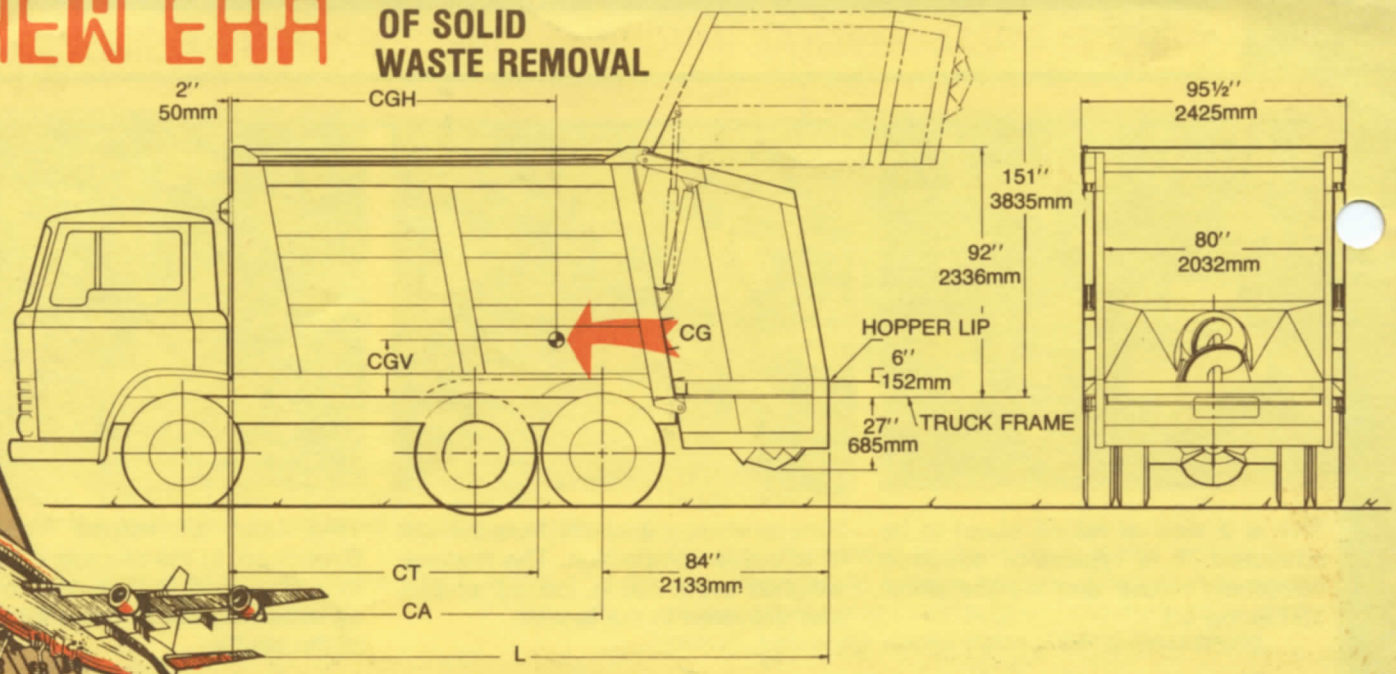
Because it contains so few parts, the **Gruncher** tailgate is surprisingly light. This allows a heavier payload on each trip to the landfill and moves the center of gravity forward away from the rear axle.

The **Gruncher** can be optionally equipped with cylinder powered container lifters for small containers (up to 3 cu. yd.) or overhead container lifters that exert a maximum pulling force of 10,000 pounds.



The **Gruncher** has no pinch or shear point. It is the safest system on the road. A safety stop bar, placed across the hopper, stops auger action when it is touched.

A NEW ERA OF SOLID WASTE REMOVAL



MODEL	GRUNCHER 18		GRUNCHER 20		GRUNCHER 25	
	ENGLISH	METRIC	ENGLISH	METRIC	ENGLISH	METRIC
CAPACITY	18 cu yd	13.76 cu m	20 cu yd	15.29 cu m	25 cu yd	19.12 cu m
BODY WEIGHT	9400 lb	4264 kg	9800 lb	4445 kg	10,400 lb	4717 kg
RECOMMENDED CHASSIS CA or CHASSIS CT	Single Axle 114" to 120"	2895 mm to 3048 mm	Single Axle 138"	3505 mm	Tandom Axle 149" to 150"	3784 mm to 3962 mm
RECOMMENDED CHASSIS G.V.W.	32,000 lb	14,515 kg	32,000 lb	14,515 kg	50,000 lb	22,680 kg
BODY FRONT to C.G. HORIZONTAL	97"	2464 mm	113"	2870	124"	3150 mm
TRUCK FRAME to C.G. VERTICAL	21"	533 mm	21"	533 mm	21"	533 mm
BODY LENGTH "L"	196"	4978 mm	220"	5588 mm	257"	6527 mm

THE GRUNCHER

Offers these outstanding advantages over the old way

- Faster route pick up — more refuse in a shorter time
- Heavier pay loads — fewer trips to the landfill
- Less Maintenance — reduced maintenance cost
- Greater Reliability — less "down time"
- Safer Operation — no "pinch points"
- Substantially lower operating costs — greater profit

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DISTRIBUTED BY:

WAYNE ENGINEERING CORPORATION
P. O. BOX 648
CEDAR FALLS, IOWA 50613
PHONE A/C 319 266-1721

ANNOUNCING THE GRUNCHER

— "The Gruncher is an entirely new application of a time-tested principle. The tapered auger fits in the floor of the hopper and is rotated by a hydraulically powered gear train. When refuse is thrown into the hopper and encounters the auger, it is torn and ground by the augers rotation and tapered shape. As the refuse moves forward it is again broken between the auger and the tunnel of the hopper. Packing takes place against the ejector blade inside the body. The auger maintains continuous packing pressure on the load and the pressure is not released by the need for the next packing cycle. This concept has been used for many years to pack all types of residential and commercial refuse."

STILL HOLDING HANDLES?

LOSING TIME?

LET THE GRUNCHER FREE YOU!

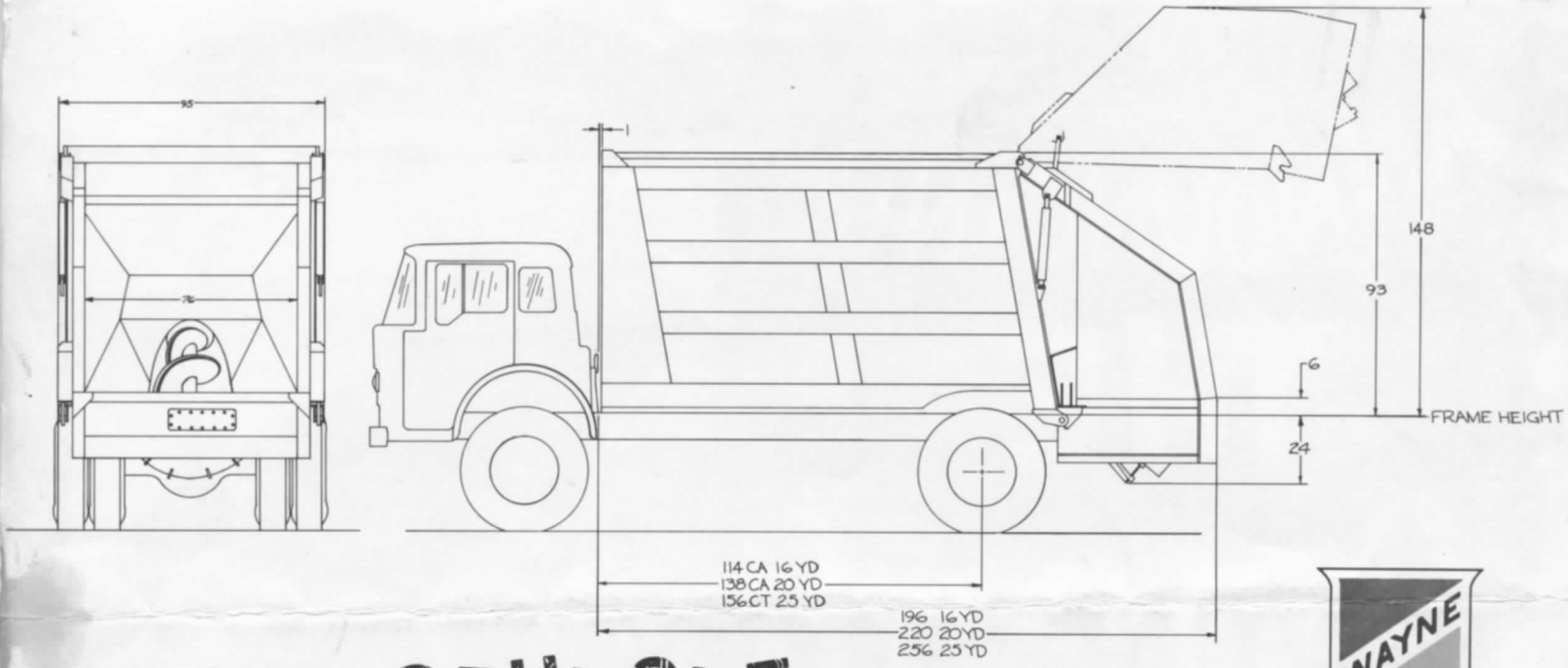
GRAB IT
GRIND IT
GRUNCH IT
GO!

WAYNE ENGINEERING CORPORATION

Box 648, Cedar Falls, Iowa 50613

Phone: (319) 266-1721

WAYNE

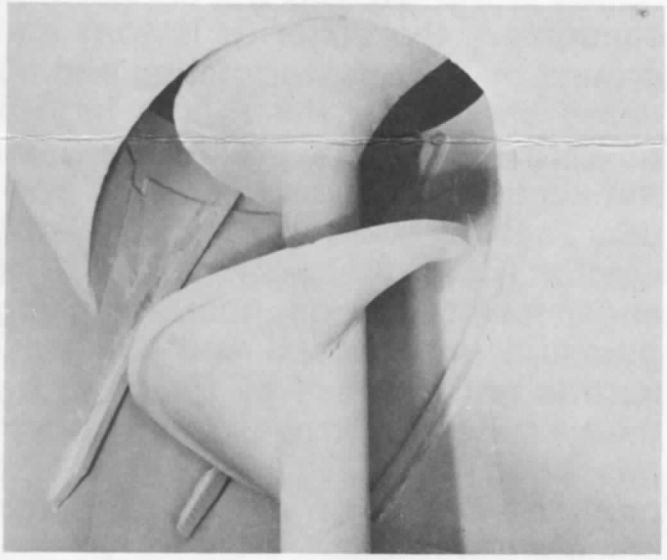


GRUNCHER FACTS

"Remember your mother's meat grinder? It reduced solid chunks to bits and pieces. That's what the Gruncher does. Result? It makes little pieces out of big items. The shearing, grinding action takes place as the refuse is "grunched" through the tapered auger. Compression of the ground refuse takes place against the ejector blade inside the body. Result? A substantially increased payload every time a run is made to the landfill."

"Gravity hasn't failed yet. That's why we use gravity to produce a normal top-to-bottom flow of refuse from the container being dumped to the floor of the hopper. Constant Gruncher action assures good scavenging of the hopper. Dump the container — gravity and the Gruncher do the rest."

Horse Power	31
Auger Speed	17 RPM
Torque	111,300 lbs./in. (9275 lbs/ft.)
Auger diameter at tip	19''
Surface area imposed on refuse at tip of auger	250 in.^{2}
Average Tagential Force on refuse at tip	46,000 lbs.
Average Unit Force on refuse at tip (Packing Pressure)	8400 PSI



"Fewer moving parts and continuous rotary motion mean less maintenance. Less maintenance means your truck is ready when you are. Note the reducing taper shape of the auger. The rugged gear train powering the Gruncher is designed to withstand very high power loads and its robust size results in extended trouble free operation."

"The Gruncher takes excess weight off the rear axle of the vehicle. The proven Gruncher tailgate weighs considerably less than the conventional back-hoe type, allowing more payload per trip. For unloading, the Gruncher tailgate raises completely. The ejector blade unloads the body rapidly. Note the reinforced protection on the underside of the Gruncher's tailgate."

WAYNE ENGINEERING CORPORATION
Cedar Falls, IA 50613

SPECIFICATIONS, GRUNCHER SERIES

These specifications describe the rear loading type refuse collection body under consideration and are given to cover the most important construction and performance perimeters of the body - item by item.

MATERIAL AND CONSTRUCTION

1. The body shall be constructed of high strength (45,000 PSI minimum yield) sheet steel and formed sections.
2. The floor and roof shall be made of 8 gage sheet steel and the sides of 11 gage sheet steel.
3. Suitable reinforcement of these members shall be incorporated to withstand the high packing forces imposed upon the body by the hydraulic system.
4. All welding shall be accomplished under an inert gas, (MIG System) to insure good weld penetration and strong, clean bonds.
5. The body shall be prepared with a phosphate wash pre-coating etch covered with an iron oxide automotive prime coat and two finish coats of high quality automotive enamel.

BODY AND PACKING TAILGATE

1. The body shall be rectangular in cross section and shall have a capacity of 16, 20, or 25 cubic yards -- depending upon size specified.
2. The packing tailgate shall incorporate the "meat grinder" auger-screw system. The auger shall be tapered and designed with variable pitch flutes to allow for a reduction of volume within the auger itself.

   The tailgate must be able to receive and shread, rip, tear and generally destruct all types of refuse commonly found in residential garbage. Items such as sacked refuse, loose refuse, tree limbs, white wares (refrigerators, stoves, water tanks, etc.) 55 gal. barrels, TV sets, chains, etc., shall be expected to be received and crushed within the tailgate assembly.

   The auger-screw shall be constructed of heavy cast manganese steel to withstand all forces imposed upon it by the material being crushed.

3. Ejector blade shall be powered by a telescoping hydraulic cylinder to impose a starting force of 28,000 lbs. (14 tons) for rapid and efficient unloading.
4. The face of the ejector blade shall be smooth to provide a self cleaning surface for all refuse to slide from.
5. The tailgate shall be raised for unloading by two 3½" bore hydraulic cylinders incorporating an automatic fluid control valve to prevent a precipitous tailgate descent in the event of a broken hydraulic hose.
6. When in the lowered position, the tailgate shall be automatically locked to the body. Raising the tailgate shall require no manual action at the rear of the body but will be accomplished simply by moving the tailgate raise control valve lever.
7. A heavy-duty, water-proof and chemically inert extruded polyurethane seal shall be incorporated between the tailgate and body to ensure water-tight seal that will withstand the chemistry of common refuse and the temperature excursions to which it is exposed.
8. One riding step, made of open safety grating, to prevent slipping in wet or icy weather, shall be mounted on each side of the tailgate with grab handles provided for riders using these steps.

ITEM 25

HYDRAULIC SYSTEM

1. A heavy-duty power take-off, operated by a lever or cable control from the cab of the truck and properly selected to produce adequate hydraulic pump speed, shall be powered by the transmission of the truck.
2. A gear-type hydraulic pump, powered by the transmission power take-off shall produce adequate hydraulic pressure at sufficient volume to result in the desired compaction of refuse.
3. A ten micron replaceable element (spin-on) filter shall be incorporated in the hydraulic return line at the reservoir to trap contaminants in the fluid circulating through the system.
4. Normal operating pressure shall be limited by a system pressure relief valve set at 2000 PSI.
5. Heavy-duty tailgate lift and ejector blade hydraulic cylinders shall be equipped with long life polyurethane seals throughout.
6. Piston rods shall be made of heavy chrome-plate alloy steel.

CONTROLS

1. A manually operated "forward" and "reverse" auger control valve shall be located on the curb side of the tailgate at the rear of the body.
2. Tailgate lift and ejector blade control valves shall be located at the forward drivers side of the body.

ELECTRICAL SYSTEM

1. The body shall be equipped with approved clearance, warning, tail, license, stop and turn signal lights complying with the National Safety Laws.
2. Toggle switches shall be located in close proximity to the manually operated hydraulic control valves to energize and electric solenoid engine accelerator that will bring the truck engine to proper speed for auger operation, load ejection or tailgate lifting.
3. An electrical console shall be located inside the cab of the truck within view and easy reach from the driver.

   This control console shall incorporate a master "ON/OFF" switch, a power take-off warning lamp that will automatically illuminate when the power take-off is engaged and the hydraulic pump is operating, a circuit breaker and driver alert buzzer.

4. The driver alert buzzer shall be operated by a push button switch located in the vicinity of the control handles at the rear of the body.