STARLIGHT SL SERIES

- Further 1100 lbs. weight reduction over comparable body size in standard Starlight series resulting in even larger payloads
- Superior body design incorporating convex curved body and hopper panels for enhanced strength to weight ratio
- Fast 10 second arm lift cycle time
- State of the art hydraulic system
- Available 'residential' control package
- Available as 'full eject' or 'tip to dump'

"What a load of garbage."

George Seagull

WITTKE
WASTE EQUIPMENT

STARLIGHT SL SERIES. LESS WEIGHT. LARGER LOADS.

Technical highlights

APPROXIMATE WEIGHT*

Body capacity (yd^3)	38	40	44
Body weight (lbs.)	13,650	13,900	14,150

* Please call for detailed weight information.

CYCLE TIMES

Automatic pack/return cycle: 20 seconds
Arm up/down dump cycle: 10 seconds

FEATURES

The Starlight SL is a legend in the industry. With all the advantages of its siblings, it weighs 1100 lbs less. This means larger legal loads in the same size package, and that means even greater performance. Available in a large variety of capacities and configurations, the Starlight SL sets the standard for everyday reliable operation.

Its streamlined body, constructed of convex curved panels, allows for optimum strength to weight ratio.

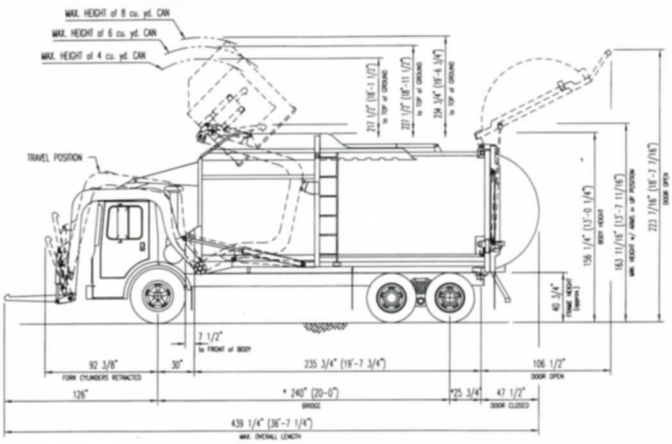
The bolt-on arm is a standard Starlight feature that is a balance of strength, rigidity and light weight. The hydraulic system incorporates state of the art components, large diameter hoses and mandrel bend seamless hydraulic tubing to produce an efficient transfer of energy to all functions.

The Starlight SL is available with many options such as rear and side vision cameras, onboard scales and automatic lubrication systems. It weighs less, hauls more and packs faster – giving you increased capacity and a greater return on your investment.

Extensive use of cutting edge CAD design technology is evident in every operational detail, making the Starlight SL series a modern day legend.

OPTIONS

- Ultrawear® shoes: 6 times the life of T1
- On board scales
- Residential package
- Low profile version, 1/2 blade version
- Split body
- Gravity dump/full eject
- Call for complete options list



SPECIFICATIONS

Materials:

Front Body
- Hopper floor: 1/4" A514 100,000 psi yield
- Sides: 3/16" A514 100,000 psi yield
- Reinforcing: 10 ga. A715 80,000 psi yield

Main body
- Body floor: 3/16" A715 80,000 psi yield
- Sides: 10 ga. A715 80,000 psi yield
- Roof: 10 ga. A715 80,000 psi yield
- Longitudinals: 2" x 6" x .250" hollow structural steel
- Tailgate: Skin 10 ga. A715 80,000 psi yield, Sides 3/16" A715 80,000 psi yield

HYDRAULICS

- Hydraulic pump: Muncie Live Pak
- Control valve: Commercial VA35
- Aluminum frame mounted reservoir
- Hydraulic cylinders: Commercial Intertech
- Seamless formed hydraulic tubing
- JIC flair system
- 109,000 lbs of compaction force

ELECTRICAL

- Vapor proof
- Sealed compression connections
- Reset circuit breakers

WARRANTY

- 1 year body and components
- 3 years hydraulic cylinders

WITTKE
WASTE EQUIPMENT

Wittke Waste Equipment
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Medicine Hat, Alberta
Canada T1C 1T8
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U.S. Parts Distribution Depot
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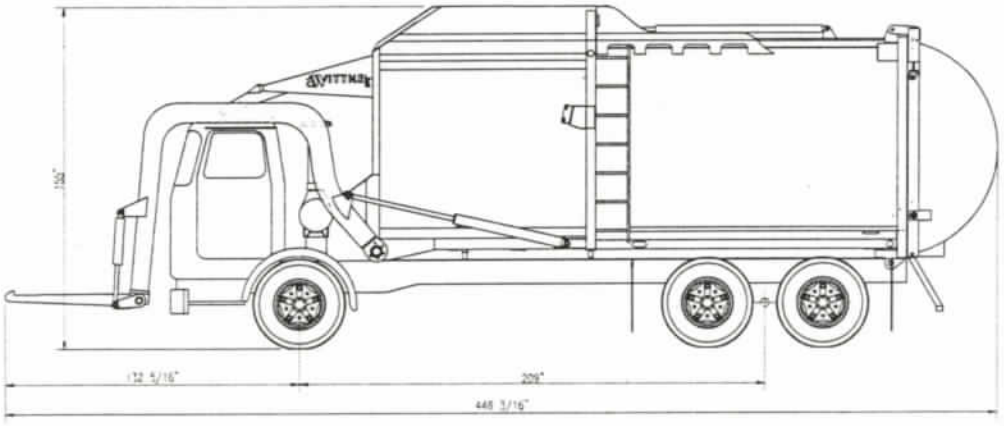
SPECIFICATIONS
STARLIGHT 'SL' FRONT LOADER
February 12, 1998



BODY

A. Dimensions

i) ***Tailgate Volume*** – 5.46 cubic yards

ii) ***Hopper Volume*** – 12.00 cubic yards

iii) ***Body Volume*** – 22.54 cubic yards

iv) ***Body Weight*** – Body weight, including all fluids, cylinders and mounting hardware is 14,000 lbs.

v) ***Overall Body Height*** – 12' – 11 ½", without arms

vi) ***Overall Body Height*** – 13' – 5 ½" with arms in dump position, forks folded back.

vii) ***Overall body length, arms and forks down*** – 37' – 1 ½".

viii) ***Overal body length, arms up*** – 30' – 11 ¼".

B. Construction

i) ***Hopper Floor*** – ASTM A514 steel, 3/16" thick, roll formed to convex profile, with two lateral reinforcement members of 2" x 2" x .188" HSS, one of 2 ½" x 2 ½" x .250" HSS and one of 4" x 3" x .250" HSS.

ii) ***Sills*** – 6" x 2" x .250" HSS with C3x4.1 reinforcement above to produce section depth of 9".

iii) ***Hopper Side Walls*** – ASTM A715-80 steel, 10 gauge thick, roll formed to convex profile. Upper hopper wings are 12 gauge ASTM A715-80.

iv) ***Front Bulkhead*** – Anchors pack cylinders, constructed of three 3/8" thick ASTM A514 horizontal steel plates attached to vertical framework of 6" x 3" x .250" HSS and

enclosed with ¼" thick ASTM A715-80 plate to produce complete water seal height of 22".

v) ***Body Floor*** – ASTM A715-80 steel, 3/16" thick, roll formed to convex profile to eliminate lateral reinforcement requirement. Sills traverse entire body front to back and serve to reinforce floor.

vi) ***Body Side Walls*** – ASTM A715-80 steel, 10 gauge thick, roll formed to convex profile to eliminate need for lateral bracing.

vii) ***Body Roof*** – ASTM A715-80 steel, 12 gauge, roll formed to convex profile to eliminate need for lateral bracing.

viii) ***Tailgate*** – Welded frame of 4" x 3" x .250" HSS with skin of 10 gauge ASTM A715-80 sheet rolled to increase strength and promote refuse flow during packing. Latch consists of hydraulically actuated hook, engaging door at one point each side. Manual safety blocks are utilized to ensure door remains closed. Tailgate utilizes replacable rubber bulb type seal which retains liquid to height of 18" above floor.

ix) ***Hopper Cover*** – framework of 2" x 2" x .125" HSS with 12 gauge ASTM A715-80 cover sheet. Framework has wear pads at 4 corners to protect framework from friction during opening and closing.

x) ***Cab Protector*** – constructed of 14 gauge ASTM A36 sheet, press formed for stiffness along edges and ribbed beneath skin for rigidity. A hinged extension provides complete cab roof protection while allowing cab to be raised without having to raise body.

xi) ***Lift Arms*** – Boxed section, constructed from 4 pieces. Upper and lower flanges are 3/8" x 3 ½" ASTM A514 steel. Webs consist of ¼" thick ASTM A715-80 steel. Internal 'honeycomb' gusseting utilized to improve stiffness. Arms mount to arm pivot shaft through mating flanges bolted together with 6 – 1" high strength(L9) bolts each side. Body is protected from arm impact during container dumping with two rubber 'dock' type bumpers bolted to the body's main midpoint frame posts and also with a hydraulic deceleration valve which is activated by the Arm pivot shaft to cushion lift cylinder action at the dump position.

xii) ***Arm Pivot Housing*** – Pivot shaft consists of 4.500" OD x .500" wall seamless mechanical tube rotating in two 12" long support bearings of 5.5" OD x .500" wall seamless mechanical tube. Contact is grease lubricated steel on steel. Support bearings are enclosed in formed 'C' shaped housing which also forms foundation for body front bulkhead.

xiii) ***Fork Assembly*** – Pivot shaft consists of 3.500" OD x .500" wall seamless mechanical tubing rotating in two 4 ½" long support bearings of 4.5" OD x .500" wall seamless mechanical tubing. Contact is grease lubricated steel on steel. Entire fork assembly is connected to arms with two 1 ¼" high strength bolts each side. Fork geometry is such that containers can be pick up from 6 ft high dock without 'stabbing'. Forks also fold back completely when arms are raised to their uppermost position to allow travel height of less than 13'-6". Rubber 'dock' type bumpers are bolted to the fork pivot shaft to cushion container impact.

xiv) ***Body Packing Wear Surface*** – The body surface consists of two formed 'C' shape channels of 1/4" thick ASTM A514 steel, one each side, integral to the main body framework and welded to the hopper floor which guide the packer blade shoes. Each slide channel has a ½" x 3" chromium carbide wear strip welded to its inside bottom surface. The strip extends through the entire length of the hopper. The main slide channel thickness is reduced to ¼" thick ASTM A715-80 beyond the hopper where the packer blade travels to eject the load only.

xv) ***Packer Blade*** – incorporates chromium carbide wear strips welded to the bottoms of its 4" x 3" x .250" HSS shoes. Shoe length is 48". Side wear is eliminated through welding of AR425 strips to the sides of the shoes. The shoes themselves are welded to the packer blade. Packer blade face consists of 3/16" thick ASTM A715-80 steel. The face is reinforced with structural ribbing. Blade height is 83".

xvi) ***Body Mount System*** – The body is fastened to the chassis at the rear utilizing one 1.500" dia. pivot pin each side which allows for raising of body with overhead crane to service chassis if so desired. Front fastening system consists of two .625" diameter grade 8 spring loaded bolts each side. Centering guide brackets are also provided, one each side, to ensure body centers onto chassis frame. Tip to dump bodies utilize 2" dia. rear hinge pin rotating in hardened bushings. Centering guide brackets are incorporated into the hoist cylinder mounting assembly to ensure body is centered onto chassis frame.

xvii) ***Hydraulic Reservoir*** – Constructed of .125" thick aluminum sheet, 50 U.S. gallon capacity, bafffled for improved oil circulation. Tank is mounted to chassis frame with two 'J' brackets with straps.

HYDRAULICS

A. Cylinders – Hydraulic cylinders are Commercial brand, except for telescopic varieties, which are Dana. Dimensions are as follows:

	BORE	STROKE	SHAFT DIA.
PACK/EJECT	5.500 x 4.500 x 3.500	168.375	3.000
PACK/TIP	5.500	61.500	3.500
HOIST	5.500	96.000	3.000
ARM(std)	4.500	45.375	2.000
ARM(West Coast)	4.000	45.375	2.000
ARM(Optional)	5.000	45.375	2.500
Fork	3.500	19.000	1.750
Top Door	2.500	84.000	1.750
Rear Door	2.500	42.000	1.750

B. Other Major Components

i) ***Pump*** – Muncie Live Pack gear type.

ii) ***Pump Driveline*** – Spicer 1350 series.

iii) ***Directional Valve*** – Commercial Intertech VA35, pneumatically actuated.

iv) ***Joystick, Arm/Fork*** – Commercial Intertech, dual handle, single axis, pneumatic.

v) ***Hoses*** – Parker 451TC, 3000 psi working pressure, 12,000 psi burst pressure.

vi) ***Steel Lines*** – Seamless hydraulic tubing.

vii) ***Return Line Filter*** – Donaldson HMK05, spin on element, Beta(x)=7μ/17μ/22μ.

viii) ***Hydraulic Oil*** – customer choice of standard brands.

ix) ***Arm Deceleration Valve*** – Yuken ZCT-06

x) ***Lock Valves, Rear Door*** – Gresen, pilot to open.

xi) ***System Pressure*** – 2300 psi.

ELECTRICAL

A. Wiring – All wiring protected from abrasion via routing through body members or enclosure in wire loom. All joints soldered and covered with heat shrink. All connections to body lighting utilize double seal plugs.

B. Lighting – All lighting conforms to the Federal Motor Vehicle Safety Standard.

C. Circuit Protection – All electrical circuits are protected with resetable circuit breakers.

CONTROLS

A. Inside Cab – All controls other than arm/fork joystick are electrical toggle or push button, and are centralized on the engine tunnel within easy access of the operator.

B. Outside Cab – Available as an option, outside controls are located behind the cab and can consist of any of: arm/fork joystick, automatic pack, and throttle speed-up.

1999 STANDARD EQUIPMENT LIST
WITTKE FRONT LOAD PACKER

Code	Feature	Description
		BODY CONFIGURATION
S-FB0101	Access Ladder	Roof access, street side
S-FB0102	Antislip Tread	Body roof and top door
S-FB0103	Conspicuity Labeling	FMVSS compliant
S-FB0104	Paint	Body, one color, acrylic urethane
S-FB0106	Mud Flaps	Mud flaps, 2 pair, with antisail rods
S-FB0107	Prime Paint	Body, complete (epoxy)
S-FB0108	Pump Cover *	Heavy duty, not required on all units
S-FB0109	Rear Hinge *	Light duty hinged rear body mount
S-FB0110	Sandblast	Body, complete
S-FB0111	Undercoating	Emulsion, between body sills
		CONTROL PACKAGE
S-FC0101	Autopack	Amber pushbutton and pilot light
S-FC0102	Backup Alarm *	Activation by tailgate ajar or transmission "reverse" mode
S-FC0103	Control Lockout	Arms "up" when packer blade is not in home position
S-FC0104	Control Lockout	Arms "up" when top door is not completely open
S-FC0105	Control Lockout	All packer body controls when access door is open
S-FC0106	Control Lockout	Autopack when tailgate is open
S-FC0107	Control Lockout *	Autopack and pack when arms elevated (on res. with full height blade only)
S-FC0108	Control Lockout *	Pack (eject) when tailgate is not completely open
S-FC0109	Emergency Stop	Pushbutton, mushroom
S-FC0110	Hoist Up/Down	Toggle switch
S-FC0111	Marker Lamps On/Off	Toggle switch
S-FC0112	Pack Return	Pushbutton, mushroom
S-FC0113	Pack (Eject)	Pushbutton, mushroom
S-FC0114	Pump On/Off	Rocker switch, illuminated
S-FC0115	Tailgate Open/Close	Toggle switch
S-FC0116	Top Door Open/Close	Toggle switch
S-FC0117	Warning Lamp & Buzzer	Access door not closed
S-FC0118	Warning Lamp & Buzzer *	Body raised (gravity dump only)
S-FC0119	Warning Lamp Only	Packer blade not home
S-FC0120	Warning Lamp Only	Top door not open
S-FC0121	Warning Lamp Only *	Tailgate ajar
S-FC0122	Warning Lamp Only *	Arms elevated
		HYDRAULICS
S-FH0101	Contaminant Filter	Air supply to control valves
S-FH0102	Hose Protective Cover	Steel coil, pack cylinder hoses
S-FH0103	Hose Protective Cover	Steel coil, rear hinge hoses (gravity dump only)
S-FH0104	Hose Protective Cover	Steel coil, fork cylinder hoses at arm pivot
S-FH0105	Mist Separator	Air supply to control valves
S-FH0106	Particle Magnet	Reservoir drain plug
S-FH0107	Suction Strainer	Reservoir mounted, 100 mesh
S-FH0108	Valve, Ball	Suction line shutoff, 2.50" diameter
S-FH0109	Valve, Deceleration	Arms "up" mode
S-FH0110	Valve, Dump	Pack circuit return oil, full eject models only
S-FH0111	Valve, Lock	Tailgate open/close motion
S-FH0112	Valve, Regen	Pack circuit extend oil, tip to dump models only
S-FH0113	Valve, Restrictor	Tailgate open/close motion
S-FH0114	Valve, Restrictor/Check	Hoist down motion
		LIGHTING
S-FL0101	Backup Lamps	Recessed, lower tailgate, 2 pcs.
S-FL0102	Center Stop Lamp	FMVSS compliant, recessed, center of tailgate, 1 pc.
S-FL0103	License Plate Lamps	FMVSS compliant, lower tailgate, 2 pcs.
S-FL0104	Marker Lamps	FMVSS compliant
S-FL0105	Mid-body Lamps	FMVSS compliant, signal and market lamps, 2 pcs.
S-FL0106	Stop, Turn, Taillamps	FMVSS compliant, recessed, lower tailgate, 4 pcs.

* Additions, 1999

Revised: October 19, 1999