OUTSIDE RAIL, EXTENDABLE TAIL ROLL-OFF HOIST

GENERAL SPECIFICATIONS:

WORK INCLUDED: Furnish 50,000 lb. Roll Off Hoist System(s) in accordance with specification. The roll off hoist shall be of the hydraulic cylinder reeving type.

To ensure system compatibility and equipment warranty responsibility, all components of the Roll Off Hoist system shall be furnished by the hoist manufacturer unless otherwise approved in advance by the Government. The hoist shall be compatible with and mounted on the Dumpster Truck specified in this package.

Roll Off Hoist shall be a current model year (2004 or newer) Outside Rail, Extendable Tail Roll Off Hoist, all lift and reeving shall be done through hydraulic cylinders. Tilt hoist shall be a standard production unit (No Prototypes), or equal. Minimum roll off tilt hoist dimensions shall be as follows:

Hoist O.D. Rail Width:	35-1/2"
Container I.D. Rail width:	37"

TILT FRAME CONSTRUCTION: OUTSIDE RAIL ONLY; 50,000# tested capacity.

The Tilt Frame Rail width shall be 35-1/2" O.D. and shall be designed to carry roll-off containers with rail widths of 37" I.D., straddle mount. The hoist frame shall carry a 22' - 0" container with no overhang.

There shall be 5 rail rollers with bronze bushings on each rail, outside mounted, (10) 4" O.D. X4" long for a total of 10 rail rollers on the hoist.

A removable stabilizer roller shall be provided at the rear most extremity of the tilt frame rails. The roller shall be 6-5/8" diameter, 25" wide and rotate on a 2 " diameter cold roll (1018) steel shaft. The roller shall have zerk fittings for lubrication.

The weight of the hoist frame when mounted and filled with oil shall not be less than 7,500#.

Two body props for maintenance of tilt hoist shall be provided. (One each side.)

The tilt frame shall be a self-contained drop-on unit for ease of change over to new chassis; containing it's own sub frame constructed of 2" x 3" structural one piece tubing with 1/4" wall thickness.

Unit shall mount on chassis with C/A dimension of 175”-184", and maximum frame rail height of 45". The chassis must be clear of all obstructions.

The tilt angle of the frame must be at least 50^{o} from horizontal when the tilt frame rails are in the full raised position.

Frame rails of the tilt frame shall be 4" x 8" structural tubing (A500 grade B) with 3/8" wall thickness, one piece construction, 50,000# yield, with a 3/8” x 3” full length steel wear strip installed on both rails.

The forward end of the tilt frame rail structure shall be equipped with a main cable sheave having a minimum diameter of 10". This sheave shall rotate on a 1018 CRS shaft with a minimum diameter of 2". Sheave shall be case hardened and shall be bronze bushed, and be provided with a zerk fitting for lubrication. Each side of said sheaves shall be supported on 2 points.

Front container hold downs shall be provided using minimum of 1-1/4" thick plate.

The tilt frame rails are to have an automatic pivoting style container locking safety latch that shall prevent rearward movement of container during transit.

All frame rail rollers shall have a minimum 1/2" plate support on both sides of roller shaft for supporting heavy container loads. No holes shall be drilled, cut or drilled into mainframe for roller support. These rollers shall be approx. 4" diameter, 4" wide with bronze bushing and rotate on a 2" cold roll (1018) shaft with recessed zerk fitting.

Crossmembers shall be welded between frame rails as required for strength.

Rear container locks shall be provided on both tilt frame rail members. Construction to be ratchet type for adjustability to various manufactured containers.

Angled steel covers on winch cylinders shall cover the top area of the extended cylinder rods to prevent debris from falling on them. Covers shall be minimum 1/2" thk. steel welded construction.

The main hinge of the tilt frame shall be of one piece cast steel construction. The tilt frame rails shall hinge on

removable 2-1/2" diameter cold roll (1018) steel shafts.

The optional fenders shall be formed of a minimum 7GA dia. plate steel. Rear bumper shall be 3" x 7" x 3/16" structural tubing. Tubing shall be suitable for recessed lighting. (Formed plastic fenders shall be available.)

Two 6" inside diameter 79" stroke cylinders with 4" diameter hard chrome rods shall be inboard mounted between the frame rails and shall be rated at 2500 PSI minimum capacity.

The lift and reeving cylinders shall be identical and interchangeable

The reeving cylinder sheave assemblies shall move in guide rails on slide blocks.

The reeving shall be accomplished by winding the 7/8" x 75' long, 6 x 25 IWRC, EIPS steel wire rope cable over five 10" case hardened sheaves. The cable shall be supplied with a case steel end fitting with swage connection, complete with cast steel hook.

HYDRAULIC SYSTEM:

Generally described this shall be all pumps, cylinders, valves, hosing, fittings, and reservoir as required for operation.

Hydraulic power shall be by a heavy duty cab controlled air operated PTO, mounted to the chassis transmission and connected by a marriage type set up to the hydraulic pump.

The pump shall be a continuous duty gear type with a capacity of no less than 27GPM at 1200 RPM and operating at a pressure of 2100 PSI.

The three spool control valve shall have a built in pressure relief valve, factory set and sealed at 2100 PSI.

The optional (3) inside controls for the spool valve shall be located inside the cab to the drivers right. A duplicate set shall be supplied street side adjacent to the drivers door. (Air controls only – no cable control available.)

Lift of the tilt frame rails shall be by two hydraulic cylinders that shall be not less than 6" inside diameter

x 79" stroke with 4" diameter hard chrome rods. Cylinders shall mount to pins with a minimum of 3" diameter (no exception). The lower shaft shall be spaced apart by 4" O.D. x 3-5/16" I.D seamless steel tubing with steel plate gusseting.

The 50 gallon oil reservoir shall be mounted directly to the truck chassis and shall itself act as a mount for the three section spool valve.

The lower cylinder mounting plates shall be minimum ½" steel and shall serve as the mounts for both the oil reservoir and lift cylinders. The plates shall be formed to wrap-over the truck chassis for additional structural support. (Tandem cylinder configuration may require separate mounting plates.) All fender mount plates to be of the same material and design.

The 50 gallon oil reservoir shall be constructed with a return line filter assembly with replaceable filter cartridges. The filter element shall be 25 Micron minimum with a 15 PSI pressure bypass. The filler opening of the reservoir shall have a filter type breather cap.

All subframe mounted hydraulic lines shall be high pressure hydraulic tubing, (shock mounted or secured with bolted steel clamps - no welding), or high pressure rated hydraulic hosing. All hydraulic connections shall be JIC and/or "O" ring fittings.

The system, if mounted, shall be delivered to the buyer with hydraulic oil meeting the manufacturers requirements for proper long life operation.

Tail section shall consist of 3" x 7" structural tubing (A500 grade B) 3/8" wall. The tail cylinder shall be a 3-1/2" bore x 80" stroke double acting single stage cylinder used to extend and retract the tail section. The tail will extend 56".

LIGHTING:

All rear turn signals, running lights and mid-body Indicators shall be LED type. Reflectors, reflective tape, back-up lights and alarm, also a body-up warning light installed in cab of truck, and all other accessories,

as required by ICC and DOT-108 will be provided.

ICC BUMPER:

The ICC bumper shall be automatic folding with manual pin up available.

PAINTING:

Complete unit shall be cleaned with all weld slag removed. All surfaces to be thoroughly cleaned and primed with one (1) coat of Low V.O.C. alkyd primer or equivalent followed by one (1) coat of Low V.O.C. Black enamel or equivalent.

MOUNTING:

Installation shall be done by the manufacturer or an authorized agent of the manufacturer.

Mounting shall be to chassis and tilt frame manufacturers engineering specifications. Factory mounting shall require the use of Huck Fasteners for hoist to chassis attachment.