

SPECIFICATIONS FOR BODY, DUMP, 3-10 CU. YD.

SCDOT Spec. No. B110.08 – 7/22/10

DESCRIPTION: The dump bodies shall be heavy-duty body and hoist assemblies designed and constructed for handling stone, dirt, and asphalt in highway maintenance applications over a very long life-cycle (15 + years). Additional uses will include tailgate and hopper type material spreader installations for snow removal. Four sizes of body are covered in this specification.

CAPACITY: Four sizes, measured in cubic yards, water level: 3, 5, 8, and 10 cu. yd.

DIMENSIONS: The inside width of the body and the inside length shall meet the minimum requirements in the chart below. The height of the body sides shall be proportioned to secure the specified cubic yard capacity. Front end and tailgate corners shall be six (6) inches higher than the sides and equipped with pockets for 2" x 6" side boards.

MATERIAL: The body shall be constructed of not lighter than 10 gauge high tensile sheet steel. Under-structure to be minimum 8 gauge high tensile strength steel. All steel used in body construction shall be minimum 45,000 psi yield. Body shall be completely seam welded on exterior. Stitch welding is not acceptable.

CAB SHIELD: The body shall be equipped with an all-steel cab shield strongly constructed of not less than 10 gauge steel and adequately braced. The shield shall be of proper proportions to afford what is commonly referred to as one-half coverage, minimum 23 inches.

BODY: The body shall be of welded construction with full-length running boards sloping and reinforced by not fewer than three (3) heavy V-section or box type pressed steel side braces (the 8 and 10 cu. yd. bodies shall have an additional or fourth brace), and box type rear corner posts; with double acting tailgate equipped with heavy-duty offset type hinges, 3/8 inch chains, and hooks for lowering to any position, together with adjustable 3/8 inch spreader chains. The body shall be designed with curved or angled sides at floor for easy cleaning. The tailgate-operating lever shall have protective rubber cover and be located at the left front end of the body for convenient operation from the driver's position in the cab. It shall be adequately supported to insure positive action. Tailgate lever control shall have adjustment on each side at rear.

The top rail to be fully enclosed utilizing radius bends to form a dirt shedding design. Cross members to be interlaced or equal through long rails so that cross members and long rails are welded to floor of body to minimize "wash board" effect and maximize floor support.

Rear tailgate shall be one-piece minimum 10 gauge steel. Tailgate pins shall be CRS machined steel, tapered to insure easy use. The tailgate shall have a box or radius dirt shedding type, reinforcing rib running horizontally as well as on sides, top, and bottom. When lowered to the horizontal position, the tailgate shall form a continuous platform with the bed of the body, allowing for only a negligible amount of gap. There shall be no "dog-house" or other encroachment within the body.

Safety devices as required by OSHA regulations Sect. 196.601 (6) (10) (11) and (12) shall be furnished. Two (2) body safety props, one on each side, shall be provided. Safety props shall be designed so operator does not have to reach inside of hoist frame to operate prop.

Additional safety equipment shall include PTO warning light, body raised warning light, and spring centered air shift toggle switch suitable for dash mounting. All hose, fittings, and connectors shall be provided to completely install unit.

A complete lighting package shall be furnished with lights and reflectors to meet South Carolina Motor Vehicle Laws, as well as FMVSS and DOT requirements. Mounting locations (recessed) shall be pre-punched and drilled. Lights shall be the shock-mounting type and recessed in rubber grommets. Stop, tail, and turn oval lights provided for each side rear body corner post. All lights shall be LED type and wiring harness to have protective coating.

HOIST: The hoist shall be the manufacturer's latest double arm, under body type and shall include hoist assembly, Muncie power take-off (PTO) with complete installation kit and hardware. Unit to be a CS20 series with drag brake, air shift compatible, gear-type hydraulic pump rated at not less than 30 gpm at 2000 psi, and dash mounted air toggle switch allowing full feathering of load in lower position, driveshaft, electric shift control for PTO, hinges, body guides and full-length steel sub-frame, completely assembled and ready for installation. The hydraulic hoist system shall be filled with hydraulic oil, or adequate oil furnished in bulk to fill the system. The hoist assembled shall be completely assembled and ready for final installation on the truck chassis.

Hoist construction shall consist of a frame with full length, formed channel, per chart below, with minimum yield strength of 45,000 psi. The body hinge to hoist link pin distance shall be not less than the minimum per chart below. Body overhang past the body hinge shall be 12 inches. The body hinge to hoist lift arm pin (at body) distance (horizontally) shall be not less than the minimum per chart below. Lift cylinder(s) shall be provided as described in chart below.

The cylinders shall be equipped with cushion valves and internal by-pass circuits. The chrome-plated piston rods shall be two (2) inches in diameter, and the pistons shall have two-part, solid, non-metallic (Teflon) seal rings with Buna-energizer rings.

The frame cross-member used to attach the base of the hoist cylinder shall be of box construction, utilizing minimum 3/8" steel, and approximately 5" X 7" in size. This cross-member may be utilized as a hydraulic reservoir. Welded braces or gussets shall be used where the cross-member joins the frame.

The body hinges shall be integrated by welding into a sub-frame rear cross member. The rear cross member shall be engineered for the capacity of the hoist. The hinges, brackets, and pins shall be heavy-duty in design and construction. The body hinges shall be suitable for welding the hinge to the body. All pins and bushings shall be machined; flame or torch cut holes are not acceptable.

The maximum dumping angle shall be not less than 47 degrees.

The design of the gear type pump shall be such that in its relation to the hoist cylinder there will be no high pressure oil line on which any swivel action occurs. Renewable wearing plates shall be furnished. All pipe fittings used in high pressure lines shall be schedule 80 type. All pins and bushings in hoist system shall be interchangeable between hoists of same model. Flame or torch cut hinges, pins, or bushings are not acceptable.

The hoist rating shall be per chart below. The hoist manufacturer shall be a current member of the National Truck Equipment Association (NTEA) and hoist system shall be listed on the current NTEA Dump Body & Conversion Hoist Chart.

3 cu. yd. body: Hoist frame - 5" x 2 1/4" x .25". Body hinge to hoist link pin distance, min. - 24". Body hinge to hoist lift arm pin distance, min. - 27". Lift cylinder 7.0 - 8.0 inches in diameter, and 15-20 inch stroke. Hoist rating - NTEA Class 40 (minimum) and not less than 13 tons with 8 ft. body.

5 cu. yd. body: Hoist frame - 6" x 2 1/4" x .25". Body hinge to hoist link pin distance, min. - 32". Body hinge to hoist lift arm pin distance, min. - 35". Lift cylinder 7.5 - 8.0 inches in diameter, and 20-25 inch stroke. Hoist rating - NTEA Class 50 (minimum) and not less than 16 tons with 10 ft. body.

8 cu. yd. body: Hoist frame - 6" x 2 1/4" x .25". Body hinge to hoist link pin distance, min. - 32". Body hinge to hoist lift arm pin distance, min. - 35". Lift cylinders (2 each) 7.0 - 8.0 inches in diameter, and 20-25 inch stroke. Hoist rating - NTEA Class 70 (minimum) and not less than 23 tons with 12 ft. body.

10 cu. yd. Body: Hoist frame - 6" x 2 1/4" x .25". Body hinge to hoist link pin distance, min. - 32". Body hinge to hoist lift arm pin distance, min. - 35". Lift cylinders (2 each) - 8.0 inches in diameter,

and 20-25 inch stroke. Hoist rating – NTEA Class 90 (minimum) and not less than 29 tons with 13 ft. body.

EQUIPMENT: The unit shall be complete with all standard equipment and accessories normally furnished. In addition, equipment shall be furnished as follows:

1. The unit shall meet all applicable OSHA requirements.
2. PTO warning light.
3. Body raised warning light.
4. The leading edge of the cab shield shall be equipped with a wind deflector designed to protect automatic-type load covers (tarps).

EQUIPMENT/SERVICES OPTIONAL: When required during the contract term, the following optional equipment and/or services shall be provided.

1. Optional electric direct drive tarp system complete with all hardware and cab mounted controls, and asphalt rated tarp compatible with 3, 5, 8, or 10 cubic yard bodies. Donovan Model 7000ELD or equal.
2. Dump bodies and associated hardware installations as may be required during the contract term.
3. Air-operated tailgate system with in-cab controls.
4. EZ-Step, 3-step retractable ladder access ladder and grab handle.
5. Hydraulic high lift tailgate, Heil Model 701-8294 or equal, configured to fit 8 or 10 cubic yard bodies.
6. Body and hoist optional equipment additions, deletions and/or substitutions of equipment as may be required by this specification, based on terms found under special conditions of the bid invitation.

COLOR: The unit shall be painted or powder coated gloss black. The unit shall be cleaned and primed prior to application of the finish paint. Primer not required for powder coating application. Serial and data plates shall be protected from being painted over. Complete body shall be undercoated with petroleum based undercoating.

All manufacturer's standard warning, safety, instructional, and identification decals shall be provided; however, there shall be no vendor or dealer identification or advertising decals allowed.

ADD OPTIONS:

1. Installation of body and hoist systems
2. Electric drive tarp assembly (Donovan Model 7000ELD)
3. Electric drive tarp assembly (Donovan Model 7000ELD) with installation
4. Pull tarp assembly
5. Pull tarp assembly with installation
6. Crank tarp assembly
7. Crank tarp assembly with installation
8. 3 Step “EZ –Step”
9. 3 Step “EZ –Step” with installation
10. Air tailgate kit with installation (truck must have air brakes)
11. Amber rotating or flashing strobe light mounted on cab shield
12. Asphalt spreader apron with installation
13. Tool box, under body, 36” x 18” x 18” with installation
14. Sloping rear tailgate

15. Floor, 3/16" steel in-lieu-of 10 GA.

16. Hydraulic high lift tailgate, Heil Model 701-8294 or equal configured to fit 8 or 10 cubic yard bodies

Deduct Options:

1. Manual shift pump in-lieu-of air shift
2. Cable shift P.T.O. in-lieu-of air shift