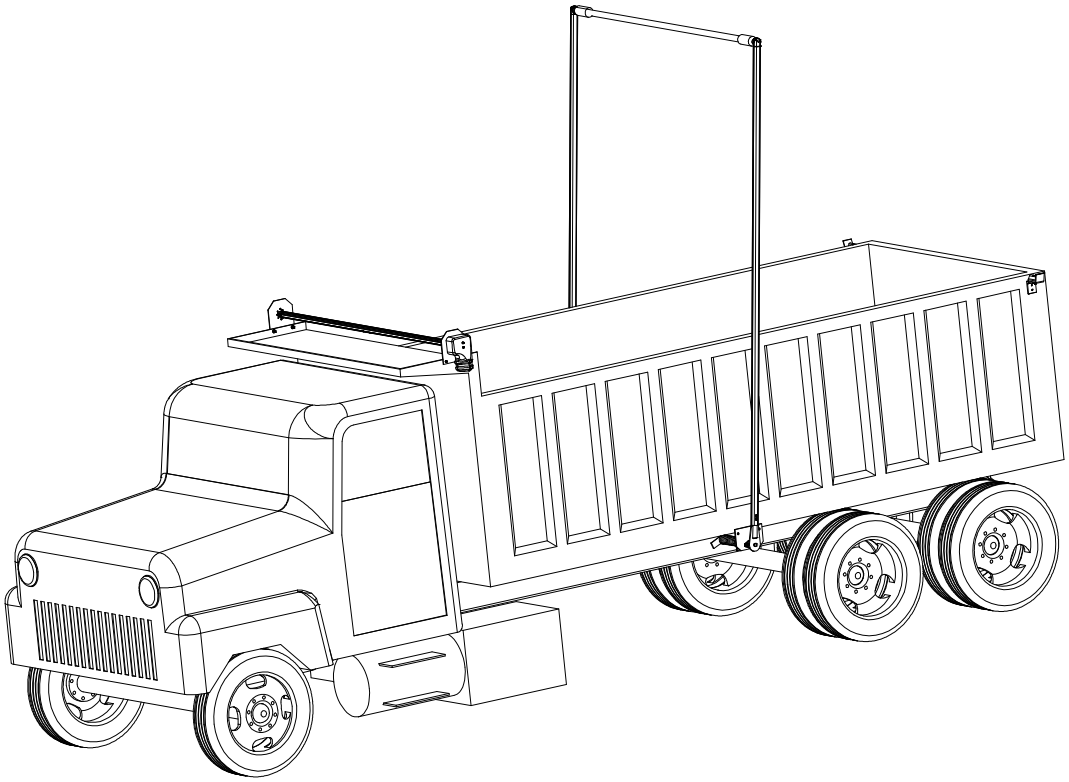
FLASH TARPING SYSTEM

Underbody Spring Version
For Dump Bodies up to 23' Long



OWNER'S MANUAL

FEBRUARY 2009

Donovan Enterprises, 3353 SE Gran Park Way, Stuart FL 34997
800-327-8287

FLASH TARPING SYSTEM _ UNDERBODY

TABLE OF CONTENTS

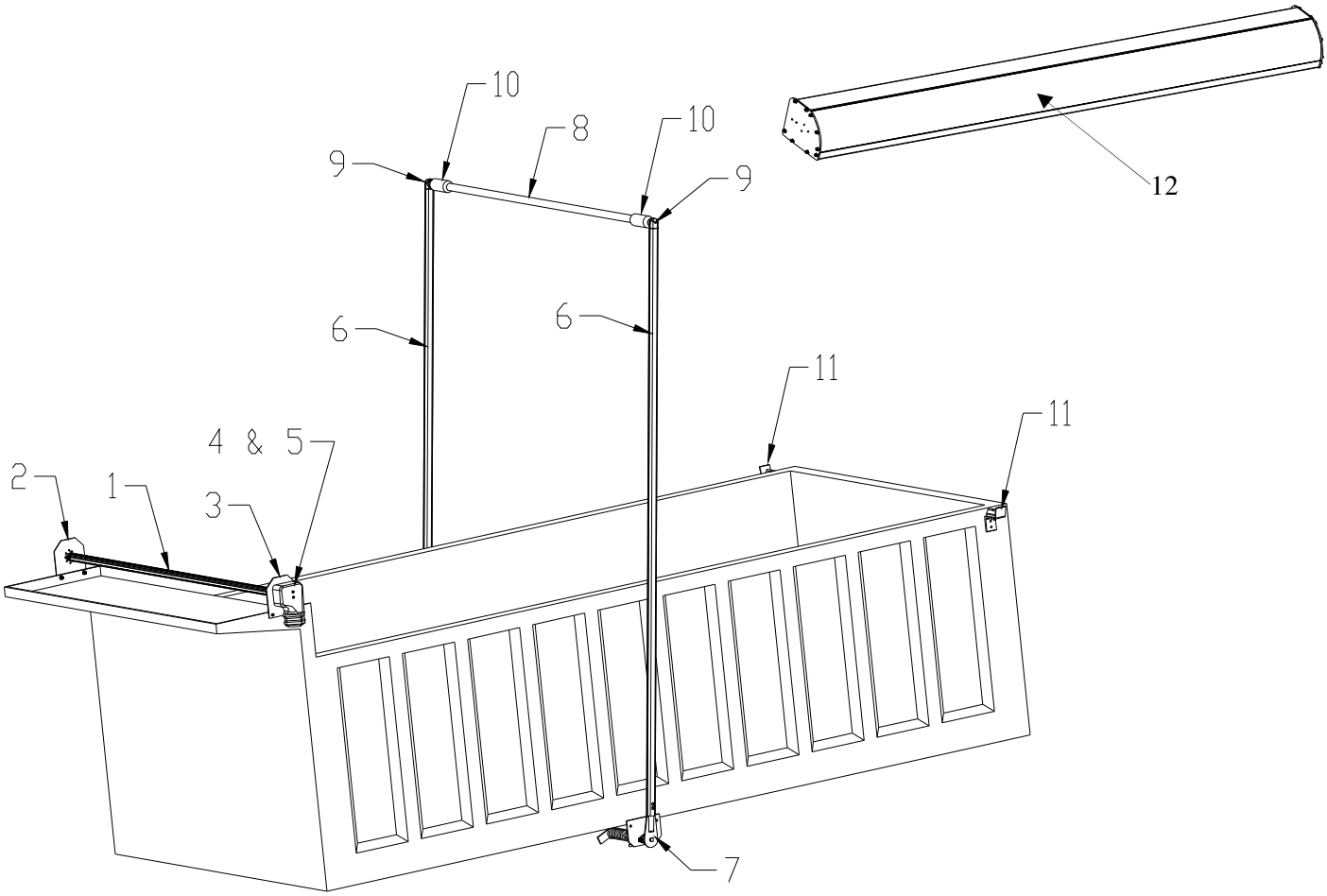
BEFORE INSTALLATION BEGINS

- READ AND UNDERSTAND OWNER'S MANUAL.
- UNPACK SYSTEM AND CHECK ALL PARTS AGAINST PACKING LIST. (PAGE 3 & 4 FOR A STRAIGHT ARM SYSTEM, PAGE 5 & 6 FOR A BENT ARM SYSTEM)

PART LIST
FLASH TARPING SYSTEM STRAIGHT ARM (PART# 1485)
PARTS AND HARDWARE

ITEM#	BALLOON	DESCRIPTION	QTY
2365	1	ALUMINUM ROLLER BAR ASSEMBLY	1
2838		3/4" OD STEEL EXTENSION SHAFT	1
3237		5/16"-18 CARRIAGE BOLT, 2 1/2" LG	2
2868		5/16"-18 LOCKNUT	2
2867		5/16 FLAT WASHER	2
3678Z	2	BEARING PLATE WITH BEARING	1
2432		1/4" X 5/8 HEX BOLT	3
2458		1/4" LOCK WASHER	3
2422		1/4" NUT	3
3270Z	3	BEARING PLATE	1
2464		3/8" - 16 X 1.5" HEX BOLT	4
2875		3/8" FLAT WASHER	4
2874		3/8" - 16 LOCK NUT	4
61L	4 & 5	12 VOLT MOTOR AND MOTOR COVER	1
85N		DURABUILT ROTARY SWITCH KIT	1
89		60' ROLL OF WIRE (8ga.)	1
1473	6	150" LONG ARM DRILLED EXTRUSION	2
1166	7	ARM/SPRING ASSY, DRIVER SIDE	1
1309		1/2"-13 CARRIAGE BOLT, 1 1/2" LG	2
2878		1/2" WASHER	2
2877		1/2"-13 LOCKNUT	2
1165		ARM/SPRING ASSY, PASSENGER SIDE	1
1309		1/2"-13 CARRIAGE BOLT, 1 1/2" LG	2
2878		1/2" WASHER	2
2877		1/2"-13 LOCKNUT	2
1076	8	REAR CROSS PIECE	1
2801		5/16"-18 HEX HEAD BOLT, 2 1/2" LG	8
2868		5/16"-18 LOCKNUT	8
1888	9	90º DIE CAST ELBOW	2
2285	10	RUBBER BUMPER KIT WITH HARDWARE	1
3218B	11	ARM REST KIT (Optional)	1
3023D-U-102	12	102" TARP HOUSING (Upgrade)	1
3032-D-U-96	12	96" TARP HOUSING (Upgrade)	1

FLASH UNDER BODY TARPING SYSTEM WITH STRAIGHT ARMS

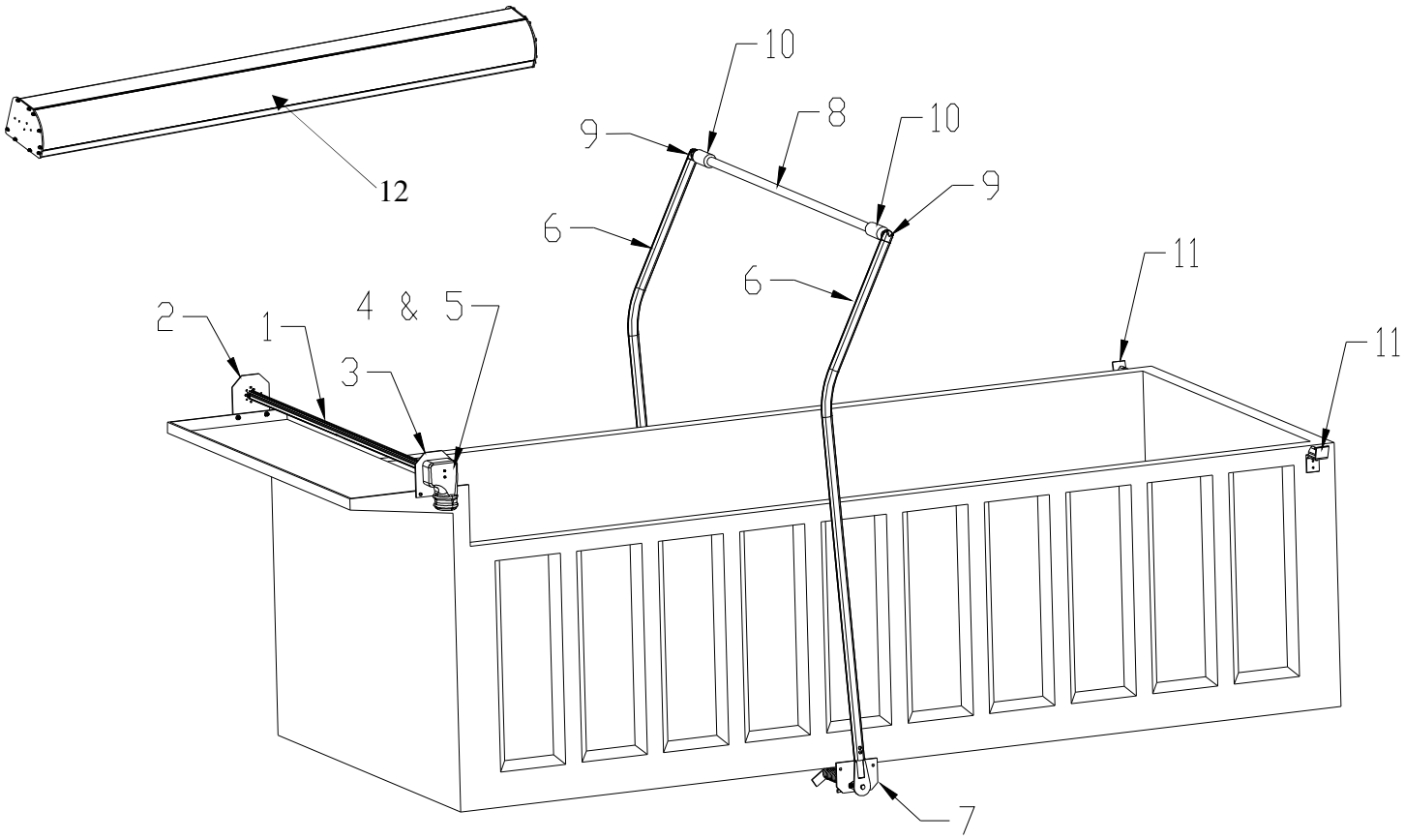


NUMBER	PART #	DESCRIPTION
1	2365	Aluminum Roller Bar Assembly
2	3678Z	Bearing Plate with Bearing
3	3270Z	Bearing Plate
4	61L	12 Volt Motor with Cover
5	4278	12 Volt Motor Cover
6	1473	150” Pivot Arm Straight
7	1166	Pivot Base Assembly, Driver Side
	1165	Pivot Base Assembly, Passenger Side
8	1076	Rear Cross Piece
9	1888	90º Die Cast Elbow
10	2285	Rubber Bumper Kit
11	3218B	Arm Rest Kit (Optional)
12	3023-D-U-102	102" Tarp Housing (Upgrade)
	3032-D-U-96	96" Tarp Housing (Upgrade)

PART LIST
FLASH TARPING SYSTEM 30º BENT ARM (PART# 1658)
PARTS AND HARDWARE

ITEM#	BALLOON	DESCRIPTION	QTY
2365	1	ALUMINUM ROLLER BAR ASSEMBLY	1
2838		3/4" OD STEEL EXTENSION SHAFT	1
3237		5/16"-18 CARRIAGE BOLT, 2 1/2" LG	2
2868		5/16"-18 LOCKNUT	2
2867		5/16 FLAT WASHER	2
3678Z	2	BEARING PLATE WITH BEARING	1
2432		1/4" X 5/8 HEX BOLT	3
2458		1/4" LOCK WASHER	3
2422		1/4" NUT	3
3270Z	3	BEARING PLATE	1
2464		3/8" - 16 X 1.5" HEX BOLT	4
2875		3/8" FLAT WASHER	4
2874		3/8" - 16 LOCK NUT	4
61L	4 & 5	12 VOLT MOTOR AND MOTOR COVER	1
85N		DURABUILT ROTARY SWITCH KIT	1
89		60' ROLL OF WIRE (8ga.)	1
1700	6	DRILLED 30º BENT EXTRUSION	2
1166	7	ARM/SPRING ASSY, DRIVER SIDE	1
1309		1/2"-13 CARRIAGE BOLT, 1 1/2" LG	2
2878		1/2" WASHER	2
2877		1/2"-13 LOCKNUT	2
1165		ARM/SPRING ASSY, PASSENGER SIDE	1
1309		1/2"-13 CARRIAGE BOLT, 1 1/2" LG	2
2878		1/2" WASHER	2
2877		1/2"-13 LOCKNUT	2
1076	8	REAR CROSS PIECE	1
2801		5/16"-18 HEX HEAD BOLT, 2 1/2" LG	8
2868		5/16"-18 LOCKNUT	8
1888	9	90º DIE CAST ELBOW	2
2285	10	RUBBER BUMPER KIT WITH HARDWARE	1
3218B	11	ARM REST KIT (Optional)	1
3023D-U-102	12	102" TARP HOUSING (Upgrade)	1
3032-D-U-96	12	96" TARP HOUSING (Upgrade)	1

FLASH TARPING SYSTEM _ UNDER BODY
30º BENT ARM



NUMBER	PART #	DESCRIPTION
1	2365	Aluminum Roller Bar Assembly
2	3678Z	Bearing Plate with Bearing
3	3270Z	Bearing Plate
4	61L	12 Volt Motor with Cover
5	4278	12 Volt Motor Cover
6	1700	30˚ Bent Pivot Arm
7	1166	Pivot Base Assembly, Driver Side
	1165	Pivot Base Assembly, Passenger Side
8	1076	Rear Cross Piece
9	1888	90º Die Cast Elbow
10	2285	Rubber Bumper Kit
11	3218B	Arm Rest Kit (Optional)
12	3023-D-U-102	102" Tarp Housing (Upgrade)
	3032-D-U-96	96" Tarp Housing (Upgrade)

FLASH INSTALLATION INSTRUCTIONS

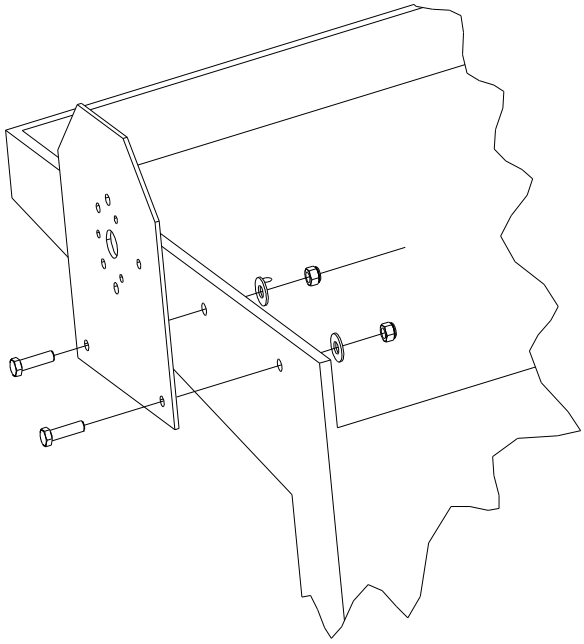
Choosing the mounting location

1. In general, the direct drive motor and rollerbar should be mounted on top of the cab shield, as far forward as possible, so that the motor and pivot arms will be less likely to be damaged by loaders. However, if head assembly is mounted too far forward the pivot arms may interfere with the truck's doors.
2. **Exceptions**: Trucks with vertical stacks. Vertical stacks may be in the way of the pivot arms if the motor and rollerbar were to be mounted forward of the stack(s). Simply shortening or re-aligning the stack(s) may solve the problem. If the stack(s) still get in the way, it may be necessary to mount the motor and rollerbar to the rear of the stack(s). If there is not room to mount the motor and rollerbar on the cab shield behind the stacks, they will need to be mounted on top of the side board pockets at the front of the body.

Installing the Bearing Plates (Skip this step if you purchased the optional modular housing)

1. Once the mounting location has been determined, you may install the bearing plates using the 3/8" x 1½" bolts, flat washers, and locknuts. (See fig. 7) You can also use the bearing plates as templates to drill the necessary mounting holes directly into the cab shield sides or other suitable location.
2. If you chose to use the bearing plates as templates and mount system directly to the cab shield, remove the ¾" bearing from the passenger side bearing plate and bolt it in place on the cab shield. **Note:** The bearing plates or cab shield holes should be exactly opposite of each other to avoid the tarp rolling up unevenly.
3. Be sure there is enough clearance between the rollerbar and the cab shield to roll-up the entire tarp.

Fig. 7



Drivers side bearing plate

Mounting the Modular Housing (if purchased)

1. Mount the housing to the truck by welding or bolting bottom rail (see fig 8A) of housing to cab shield or other suitable location on truck.

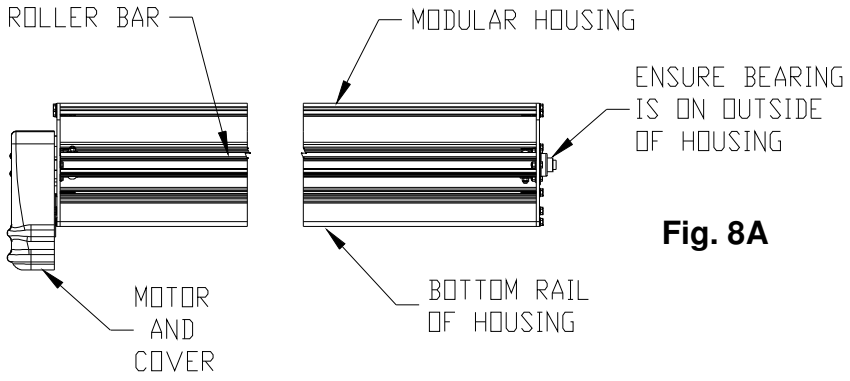


Fig. 8A

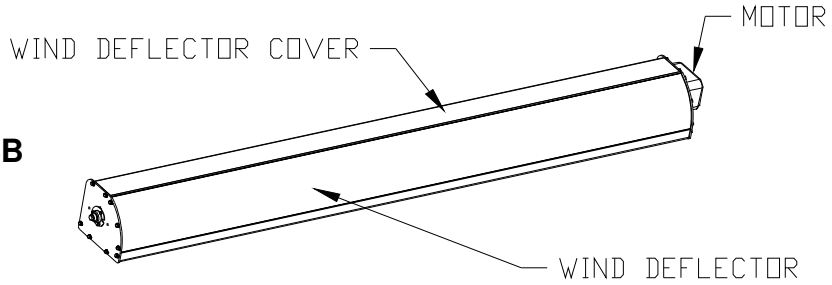


Fig. 8B

Mounting the Direct Drive Motor and Rollerbar

1. Mount the motor to the bearing plate, cab shield or housing (See fig. 8C, bearing plate option shown).
2. Measure the distance from the inside of one bearing plate to the inside of the other bearing plate.
3. Cut the roller bar (on the end without the pre-drilled hole) one inch shorter than the length you measured in step 2.
4. Drill a 1/2" dia. hole, 3/4" from the end of the rollerbar you just cut. Start the hole in one of the smooth-sided slots (see fig 8D). Slide one end of the rollerbar over the motor output shaft and secure with a 5/16" carriage bolt, washer, and nut. (See fig. 8C)

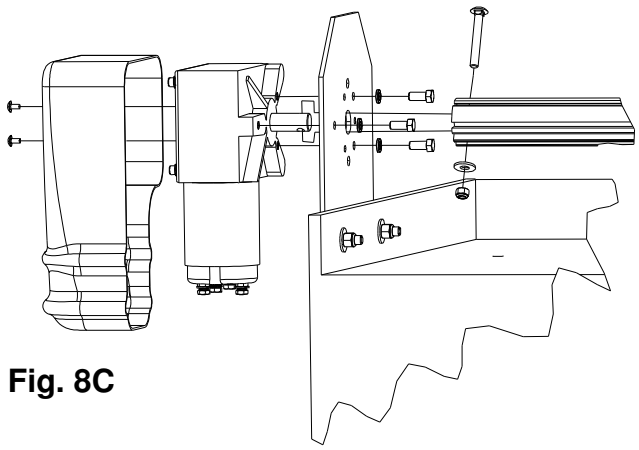


Fig. 8C

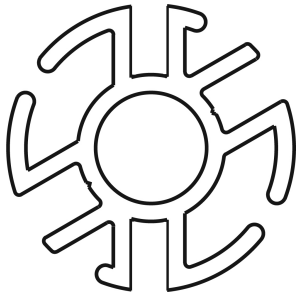
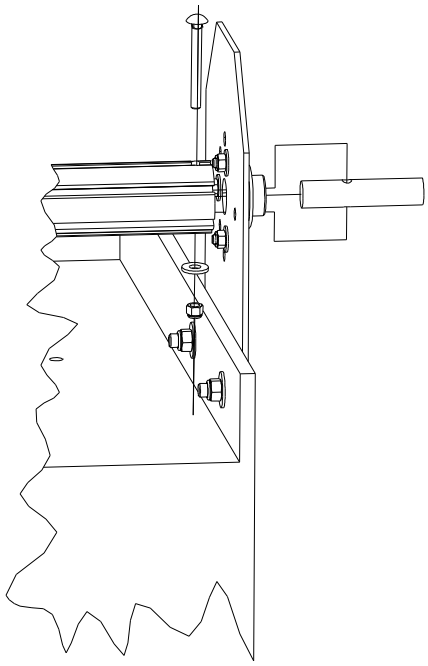


Fig. 8D End view of roller bar

Mounting the Direct Drive Motor and Rollerbar (Continued)

5. Slide the extension shaft through the bearing plate, cab shield or housing and into the roller bar. Line up the holes in the roller bar with the hole in the extension shaft and secure with the 5/16 carriage bolt, washer, and nut. (See fig. 9, bearing plate option shown.)

Fig. 9



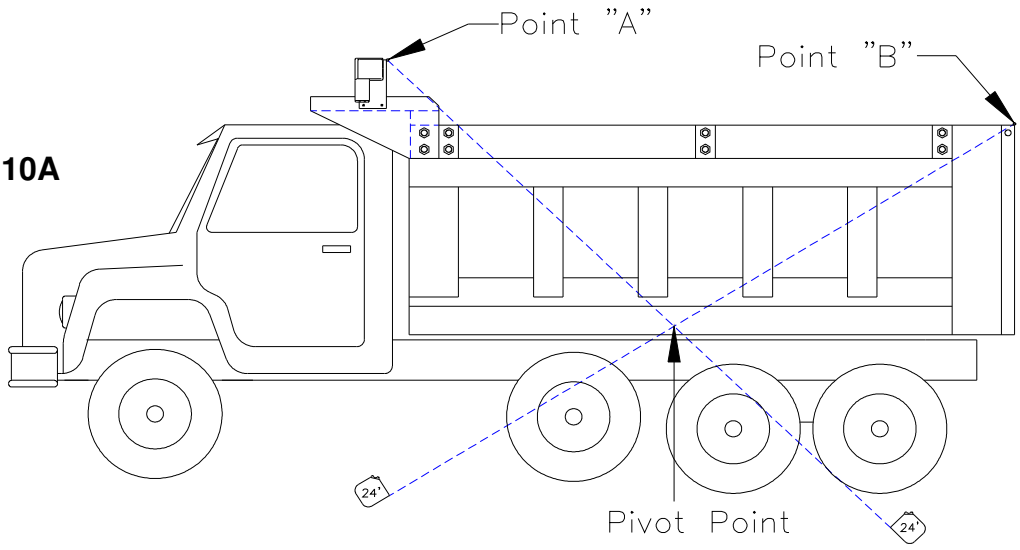
Wiring the Control Box

1. See the instructions provided with Electrical Switch Kit for hooking up the electrical power to your system.

Pivot Mount and Installations

1. To find the pivot point, pull one tape measure from point “A” and a separate tape measure from point “B”. Next cross the tape measures at the bottom-middle of the truck body where the two measurements are equal – mark the spot beneath where they cross. This is your pivot point. (See fig. 10A)

Fig. 10A

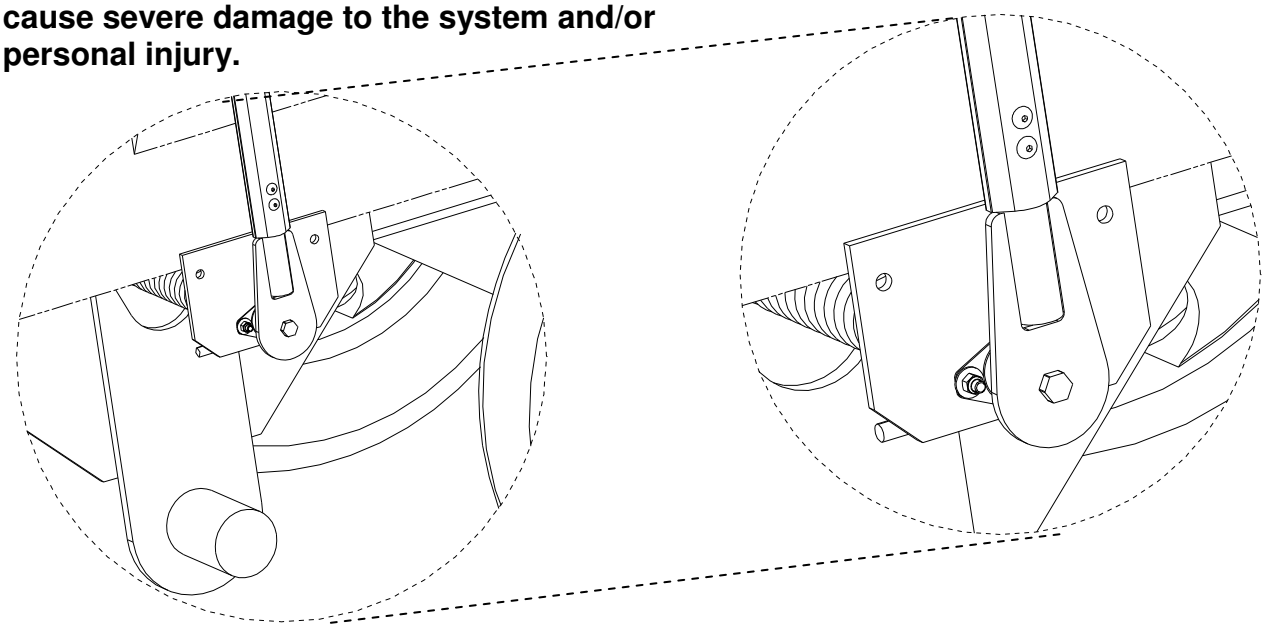


NOTE: If you are welding on your pivot mounts, skip to step #3.

2. **Bolting your pivot mount in place:** Using the pivot mount as a guide to determine the hole position for mounting, ensure the center of the mounting plate is aligned with the pivot point as determined in step 1 above. Drill two 9/16” holes in line with the center holes on the pivot mount on each side of the box (See fig. 10B). Bolt the pivot mounts to the box using the included ½” carriage bolts, flat washers, and lock nuts (the head of the bolt must be on the outside, and the washer and nut on the inside).
3. **Welding your pivot mount in place:** Ensure center of mounting plate is aligned with pivot point as determined in step 1 above. Weld securely in place.

<u>CAUTION</u>: Failure to comply with these instructions could cause severe damage to the system and/or personal injury.

Fig. 10B



Pivot Arms and Rear Cross piece installation

1. Slide the pivot arms on the pivot mounts. Do not bolt.
2. Install the 90º die cast elbows and rear cross piece with no bolts to check resting position and desired arm length.
3. Rear cross piece should rest on back of truck so tarp will fully cover the load. Ensure the rear cross piece does not interfere with tailgate operation.
4. If the pivot arms are too long, then cut both pivot arms as needed until system is at proper length (both arms must be cut the same length).
5. If you have 30º bent pivot arms, cut equal amounts from lower end of each arm at pivot mount to reach desired arm length.
6. Check for binding or rubbing of the pivot arms against the sides of the box. Check both sides of the box, and adjust the pivot mounts or arms as necessary for clearance. Bolt lower arms to pivot mount using 5/16" x 2 1/2" pan head bolts and lock nuts.
7. Insert the cross piece through the sewn pocket of the tarp, insert rubber bumpers onto the cross piece.
8. Install rear cross piece and die cast elbows using bolts, washers and lock nuts supplied (see fig 11).
9. Slide rubber bumpers to impact areas. Once the rubber bumpers are positioned properly, use the 1/4" predrilled hole in the rubber bumper as a template to drill 1/4" hole through the center of rear cross piece. Use the provided fastening hardware (1/4" X 4" bolt, 2 washers and lock nut) to secure the rubber bumper in place. The assembly should follow the following order: hex bolt, washer, rubber bumper, washer, lock nut. Drill hole horizontally with rear cross piece resting on back of truck body to ensure bolt will not catch on tailgate (see fig 11).

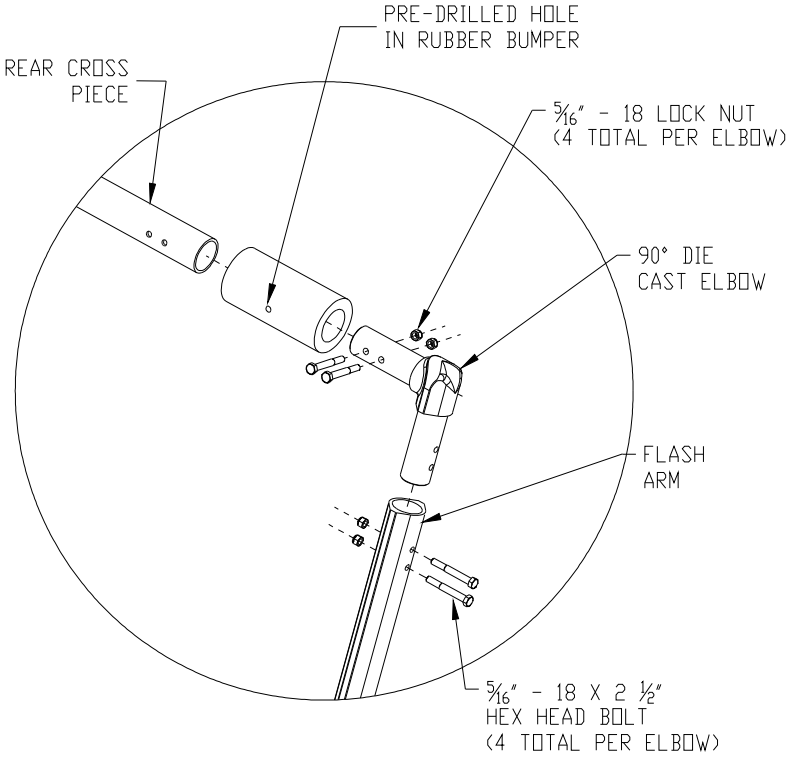


Fig. 11

Pivot Arms and Rear Cross piece installation (continued)

11. Insert the other end of the tarp into center slot on the roller bar (see fig. 12). Center the tarp on roller bar and rear cross piece.
12. Operate system to ensure it works properly.
13. Verify all nuts and bolts are completely tightened on system.

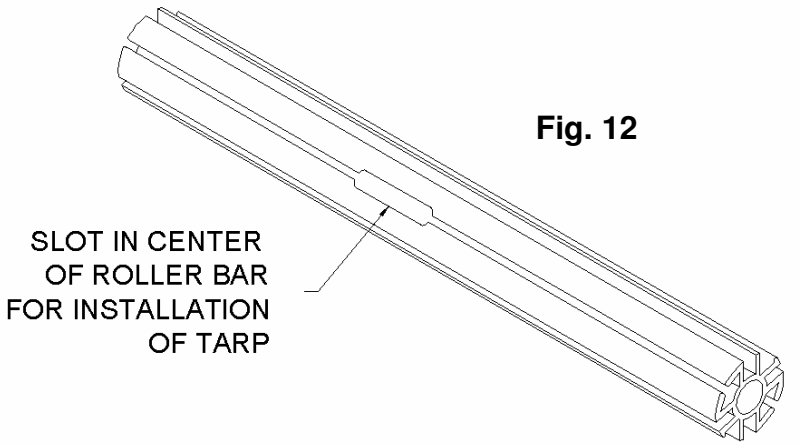


Fig. 12

Installing the Pivot Arm Rests (Optional)

1. Unwind the tarp so that the system is in the “covered” configuration.
2. Position the pivot arm rests so that upper arms are as level as possible and do not make contact with the tailgate or any other part of the dump body.
3. Weld or bolt pivot arm rests into place.

ENTERPRISES Donovan Raise The Standard

Thank You for Your Purchase

www.donovan-ent.com

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