

1. Loosen the nut on the lower cable assembly above the lower cable steel plate.

2. Adjusting the nut below the lower cable steel plate will cause the upper pulley to raise (screw nut on threads) or lower (screw nut off threads).

3. Once the upper pulley is in the correct position tighten the upper nut back against the lower cable steel plate.

4. If there is not enough adjustment available on the lower cable, then you can place the lower cable steel plate on top of the two steel angle supports instead of below the two angles by removing the two steel plate hold down bolts.

5. The inner extrusion can also be raised or lowered using the same procedure on the upper cable (except you can not move the upper cable metal plate).

6. If you still do not get the proper adjustments for the housing to rest on the rubber bumpers, then you can add a spacer below the rubber bumpers to raise the

bumpers up higher.

Adjust cable if
extrusions sticking
up too for
- not coming in

If the Tower going Up

OIL but drifting down

Must be a leak somewherecheck fittings explined to

Nake sure pipe dope
around fittings

- see if any hydrauleur

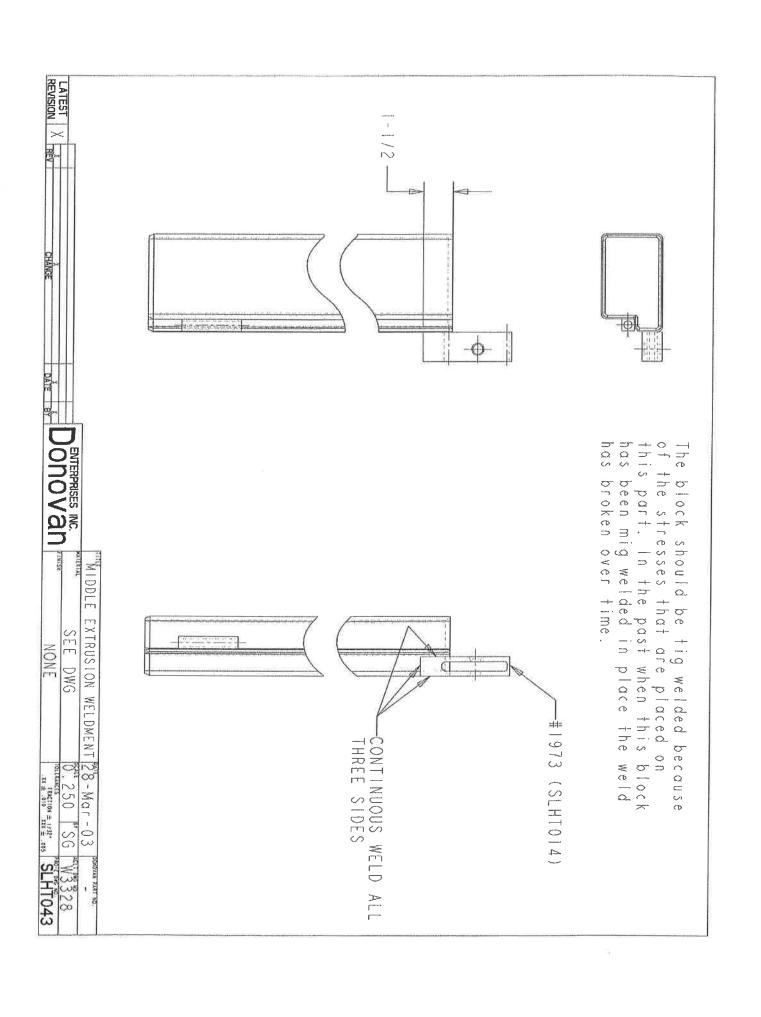
fluid around fittings on

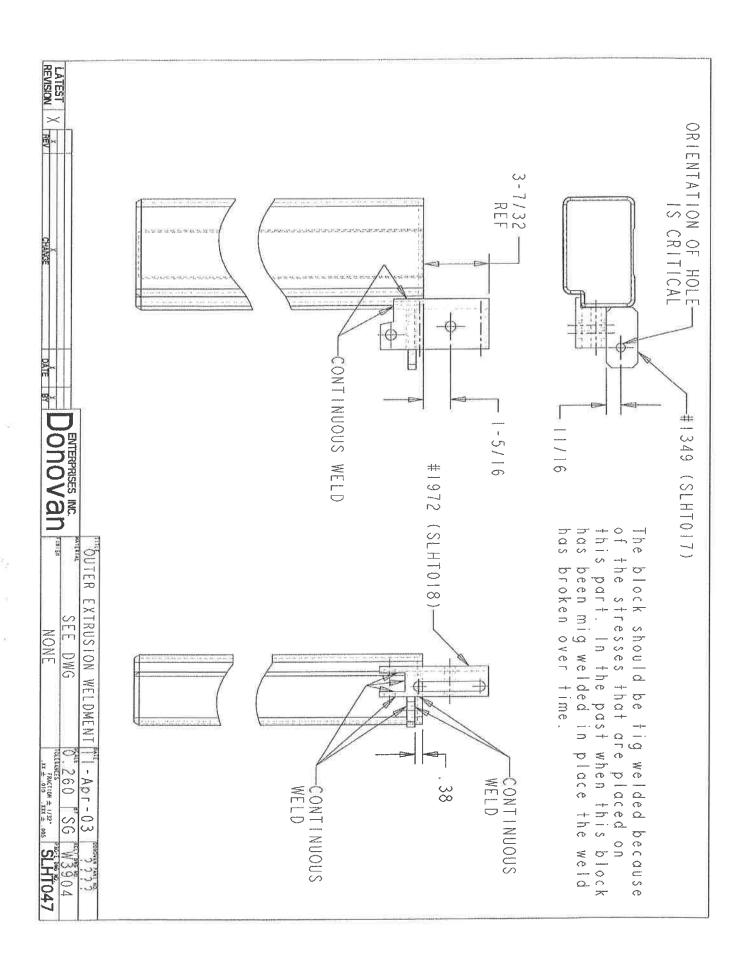
Loss or agerras

male sure no dange to

bittings hours or agerrai

- fittings tight





### EUROPE STYLE HY-TOWER (SL) STICKER LOCATIONS

## STICKER #1 WITH SILVER BACK GROUND

U.S. Patent No. 6,109,680

## STICKER #2 WITH SILVER BACK GROUND

Norme CII
TYPE OF EQUIPMENT: 11Y-TOWER
FARRICATION YHAR: 2000
SERIAL NUMBER: 123
MAXIMAL PRESSURE: 1000 PSIG
FABRICATION COMPANY: DONOVAN ENTERPRISES, INC. USA

## STICKER #3 WITH YELLOW BACK GROUND

#### CAUTION

TO PREVENT RISK OF INJURY, KEEP HANDS AWAY FROM MOVING PARTS WHILE TARP SYSTEM IS IN OPERATION.

### ATTENTION -

POUR EVITER LES ACCIDENTS, TENIR LES MAINS ELOIGNEES DES PIECES EN MOUVEMENT QUAND LE SYSTEME DE BACHEAGE EST ACTIONNE.

### CAUTION

DO NOT MOVE VEHICLE WITH TARP SYSTEM IN RAISED POSITION,

### ATTENTION

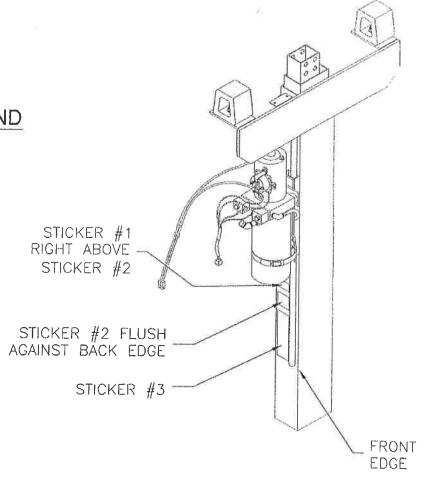
NE PAS BOUGER LE VEHICULE QUAND LE SYSTEME DE BACHAGE EST EN POSITION HAUTE.

### CAUTION

ENSURE ADEQUATE LIGHTING WHENEVER OPERATING YOUR TARP COVERING SYSTEM.
IF SUFFICIENT DAYLIGHT IS NOT AVAILABLE, DO NOT OPERATE WITHOUT ALTERNATE LIGHTING. BEFORE OPERATING TARP SYSTEM, ENSURE AREA ABOVE AND BESIDE IS CLEAR OF ELECTRICAL LINES OR OTHER OBSTRUCTIONS.

### ATTENTION

AVANT DECOMMENCER
L'OPERATION DE BACHAGE IL EST
NECESSAIRE QUE LA LUMIERE SOIT
SUFFISANTE NE PAS COMMENCER
LE BACHAGE AVANT D'AVOIR
AJOUTER UNE LUMIERE D'APPOINT.
VOUS DEVEZ VERIFIER AUSSI QUE
LA ZONE DE MANOEVRE EST
SUFFISANTE ET EST DEGAGEE DE
LIGNES ELECTIQUES OU DE TOUT
AUTRE OBSTACLE



A3676 Revis

### US STYLE HY-TOWER (SL) STICKER LOCATIONS

## STICKER #1 WITH SILVER BACK GROUND

U.S. Patent No. 6,109,680

## STICKER #3 WITH BLUE BACK GROUND

Donovan Customer Assistance

For technical assistance, instruction manuals or ordering information, earl 800-327-8287

## STICKER #2 WITH SILVER BACK GROUND

Norme CFI
TYPE OF EQUIPMENT: HY-TOWER
FABRICATION YEAR: 2000
SERIAL NUMBER: 123
MAXIMAL PRESSURE: 1000 PSIG
FABRICATION COMPANY: DONOVAN ENTERPRISES, INC. US.

## STICKER #4 WITH YELLOW BACK GROUND

#### CAUTION

TO PREVENT RISK OF INJURY, KEEP HANDS AWAY FROM MOVING PARTS WHILE TARP SYSTEM IS IN OPERATION.

### ATTENTION

POUR EVITER LES ACCIDENTS, TENIR LES MAINS ELOIGNEES DES PIECES EN MOUVEMENT QUAND LE SYSTEME DE BACHEAGE EST ACTIONNE.

### CAUTION

DO NOT MOVE VEHICLE WITH TARP SYSTEM IN RAISED POSITION,

### ATTENTION

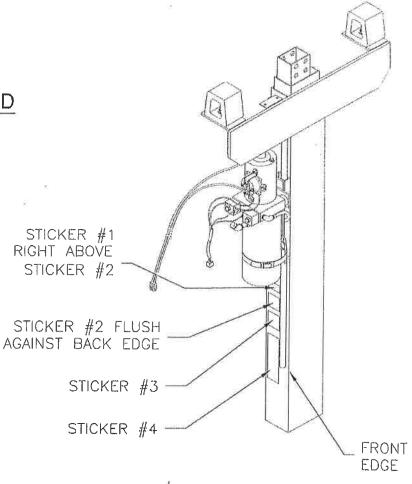
NE PAS BOUGER LE VEHICULE QUAND LE SYSTEME DE BACHAGE EST EN POSITION HAUTE,

### CAUTION

ENSURE ADEQUATE LIGHTING WHENEVER OPERATING YOUR TARP COVERING SYSTEM.
IF SUFFICIENT DAYLIGHT IS NOT AVAILABLE, DO NOT OPERATE WITHOUT ALTERNATE LIGHTING.
BEFORE OPERATING TARP SYSTEM, ENSURE AREA ABOVE AND BESIDE IS CLEAR OF ELECTRICAL, LINES OR OTHER OBSTRUCTIONS.

### ATTENTION

AVANT DECOMMENCER
L'OPERATION DE BACHAGE IL EST
NECESSAIRE QUE LA LUMIERE SOIT
SUFFISANTE NE PAS COMMENCER
LE BACHAGE AVANT D'AVOIR
AJOUTER UNE LUMIERE D'APPOINT,
VOUS DEVEZ VERIFIER AUSSI QUE
LA ZONE DE MANOEVRE EST
SUFFISANTE ET EST DEGAGEE DE
LIGNÉS ELECTIQUES OU DE TOUT
AUTRE OBSTACLE



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### FRENCH STYLE HY-TOWER (SL) STICKER LOCATIONS

## STICKER #1 WITH SILVER BACK GROUND

U.S. Patent No. 6,109,680

## STICKER #2 WITH SILVER BACK GROUND

Norme CE TYPE OF EQUIPMENT: HY-YOWER FABRICATION YEAR: 2000 SERIAL NUMBER: 121: MAXIMAL PRESSURE: 3000 PSIG FABRICATION COMPANY: DONOVAN ENTERPIESEN, INC. USA

## STICKER #4 WITH YELLOW BACK GROUND

#### CAUTION

TO PREVENT RISK OF INJURY, KEEP HANDS AWAY FROM MOVING PARTS WHILE TARP SYSTEM IS IN OPERATION,

#### ATTENTION

POUR EVITER LES ACCIDENTS, TENIR LES MAINS ELOIGNEES DES PIECES EN MOUVEMENT QUAND LE SYSTEME DE BACHEAGE EST ACTIONNE.

### CAUTION

DO NOT MOVE VEHICLE WITH TARP SYSTEM IN RAISED POSITION.

### ATTENTION

NE PAS BOUGER LE VEHICULE QUAND LE SYSTEME DE BACHAGE EST EN POSITION HAUTE.

### CAUTION

ENSURE ADEQUATE LIGHTING WHENEVER OPERATING YOUR TARP COVERING SYSTEM.
IF SUFFICIENT DAYLIGHT IS NOT AVAILABLE, DO NOT OPERATE WITHOUT ALTERNATE LIGHTING. BEFORE OPERATING TARP SYSTEM, ENSURE AREA ABOVE AND BESIDE IS CLEAR OF ELECTRICAL LINES OR OTHER OBSTRUCTIONS.

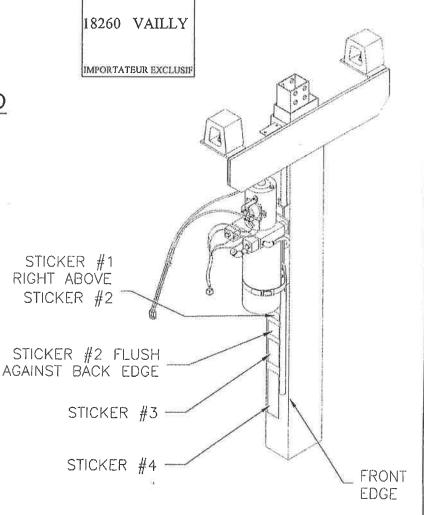
### ATTENTION

AVANT DECOMMENCER
L'OPERATION DE BACHAGE IL EST
NECESSAIRE QUE LA LUMIERE SOIT
SUFFISANTE NE PAS COMMENCER
LE BACHAGE AVANT D'AVOIR
AJOUTER UNE LUMIERE D'APPOINT.
VOUS DEVEZ VERIFIER AUSSI QUE
LA ZONE DE MANOEVRE EST
SUFFISANTE ET EST DEGAGEE DE
LIGNES ELECTIQUES OU DE TOUT
AUTRE OBSTACLE

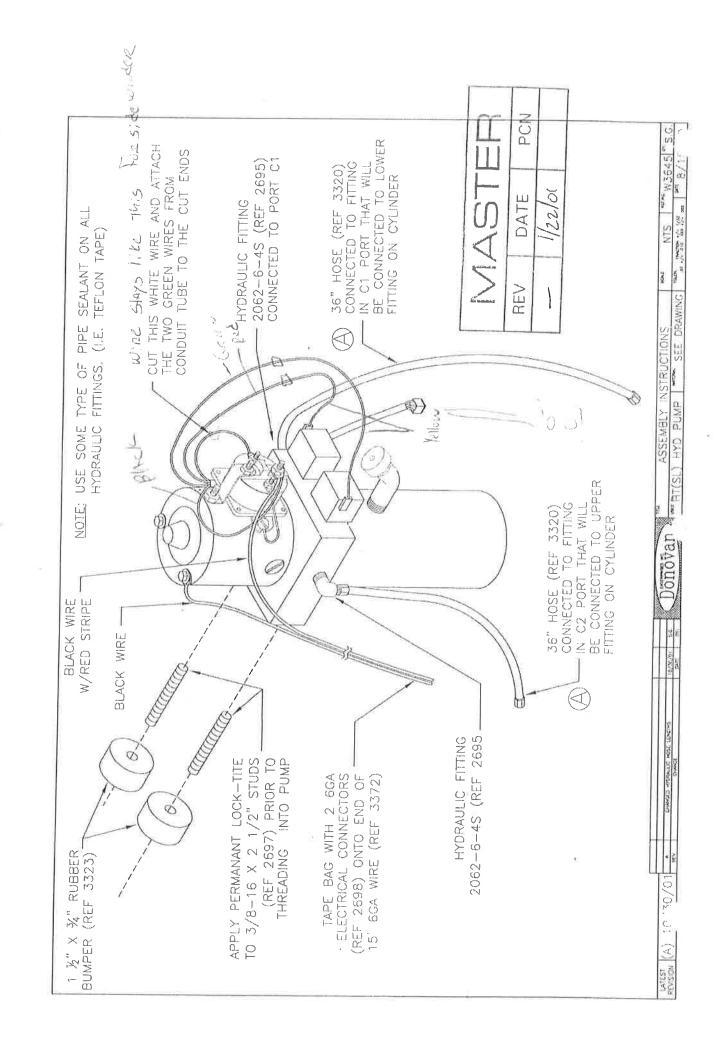
# STICKER #3 WITH WHITE AND BLUE BACK GROUND

SIPIM

Tel. 02 48 73 79 30



A 3678 PEV B



JENT

### **URGENT ... URGENT**

DATE:

June 1, 2006

TO:

GRAYHOUND TRASH REMOVAL

Attention:

MECHANIC - URGENT

ROBERT

From:

Donovan Entrprises

Lynn

1-800-327-8287, ext 120

RE: HY-TOWER ROLLER BAR

THE ROLLER BAR HAS A MALE AND FEMALE SHAFT. THE MALE SHAFT IS NOT ATTACHED TO THE SPRING. IF THIS SIDE IS INSERTED IN THE DRIVER'S SIDE OF THE HOUSING AND ROTATED, THE SPRING WILL NOT ROTATE AND WILL NOT BE TENSIONED.

\*\* TO DETERMINE WHICH SIDE OF THE ROLLER BAR SHOULD BE ON THE DRIVER'S SIDE:

- 1.) INSTALL ROLLER BAR IN HOUSING, INSERTING BOLT THROUGH PASSENGER END AND DRIVE PIN THROUGH DRIVERS SIDE RATCHET TUBE.
- 2.) INSERT A BREAKER BAR WITH 3/4" BIT INTO SQUARE END IN RATCHET ON OUTSIDE OF HOUSING (DRIVERS SIDE)
- 3.) ROTATE BREAKER BAR CLOCKWISE AFTER ABOUT 10-15, THE ROLLER TUBE WILL START TO ROTATE AND YOU WILL HEAR THE SPRING ROTATING INSIDE THE TUBE. IF NOTHING HAPPENS AFTER YOU HAVE ROTATED THE SHAFT 20-25 TIMES, THEN REMOVE THE ROLLER BAR, TURN IT AROUND AND REPEAT THE PROCEDURE.

PLEASE MAKE SURE YOU ROTATE THE SHAFT ONLY WITH THE BREAKER BAR. DO NOT ROTATE THE ROLLER TUBE ITSELF BY HAND. IF THE BAR IS IN BACKWARDS THIS WILL PERMANENTLY DAMAGE THE SPRING.

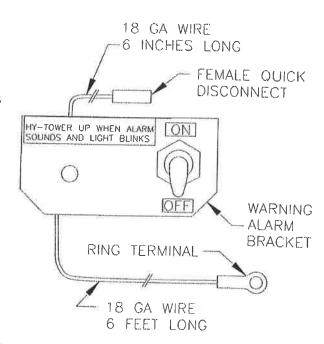
LET US KNOW IF YOU HAVE ANY QUESTIONS.

LYNN DONOVAN ENTERPRISES

### TEST FOR ALARM WIRES ATTACHED CORRECTLY

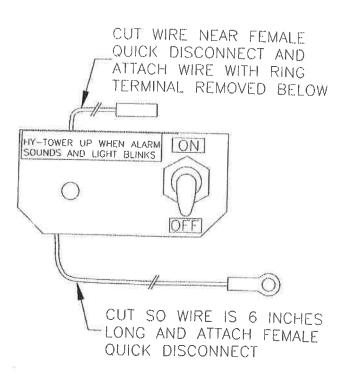
### **TEST ALARM OPERATION**

- 1. Connect ring terminal to (+) battery post and female quick disconnect to (-) battery post. If alarm and light work then alarm is wired correctly. Stop this procedure and continue with installation instructions.
- Connect ring terminal to (-) battery post and female quick disconnect to (+) battery post. If alarm and light work then alarm is wired incorrectly. Continue with "CORRECTING ALARM WIRES" instruction below.
- 3. If neither test worked then you have a bad alarm. Contact Donovan Enterprises for new alarm.



### **CORRECTING ALARM WIRES**

- 1. Cut wire with ring terminal so there will only be 6 inches of wire left attached to the alarm bracket (keep the wire you cut).
- 2. Attach a female quick disconnect to the end of the wire you just cut that is still attached to the alarm bracket.
- 3. Cut female quick disconnect off the other wire on alarm bracket.
- 4. Splice wire with ring terminal (that you cut in step one) onto the end of the wire that had the quick disconnect that you just cut off.
- 5. You can now proceed with the installation instructions.

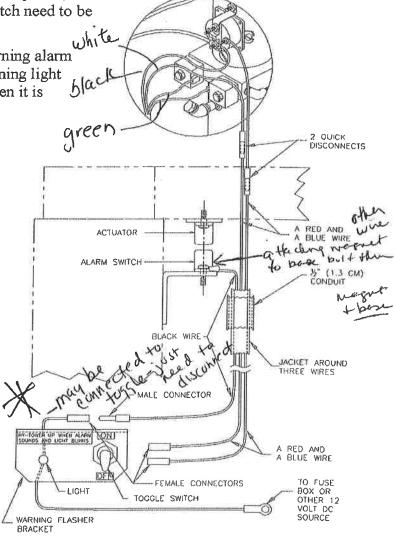


### HY-TOWER (SL) WARNING FLASHER INSTALLATION

 After Hy-Tower unit installation is completed, the warning light, alarm, and cutout switch need to be installed.

 Determine mounting location of warning alarm bracket inside cab of truck. The warning light should be easily visible to driver when it is installed.

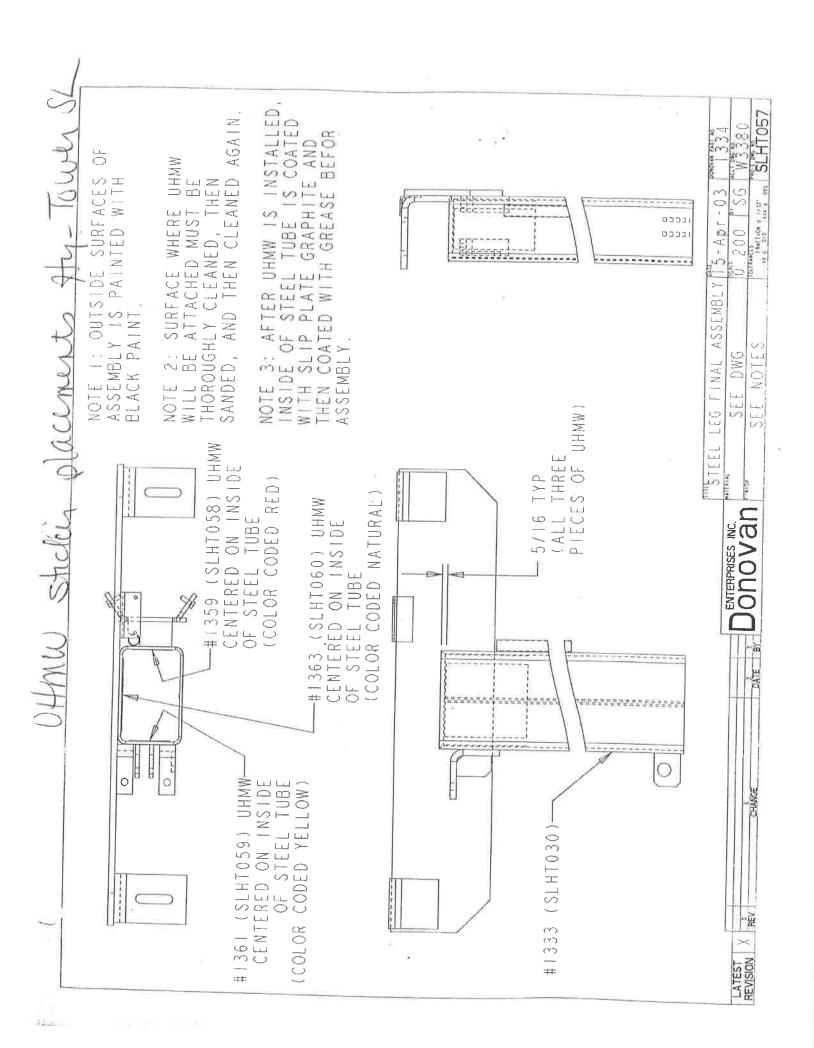
- Run the wires (there are three wires inside a jacket) that are coiled at the end of the conduit near the base of Hy-Tower (SL) to the warning alarm bracket you just installed.
- Connect black wire from the alarm switch to the wire attached to the light (quick disconnects are already installed on wires).
- Connect the blue and red wires to the male connectors on the back of the toggle switch (it does not matter which wire goes to what connector).
- Connect the black wire, coming from the light (wire has ring terminal on end), to the fuse box or some other 12 volt DC power source.

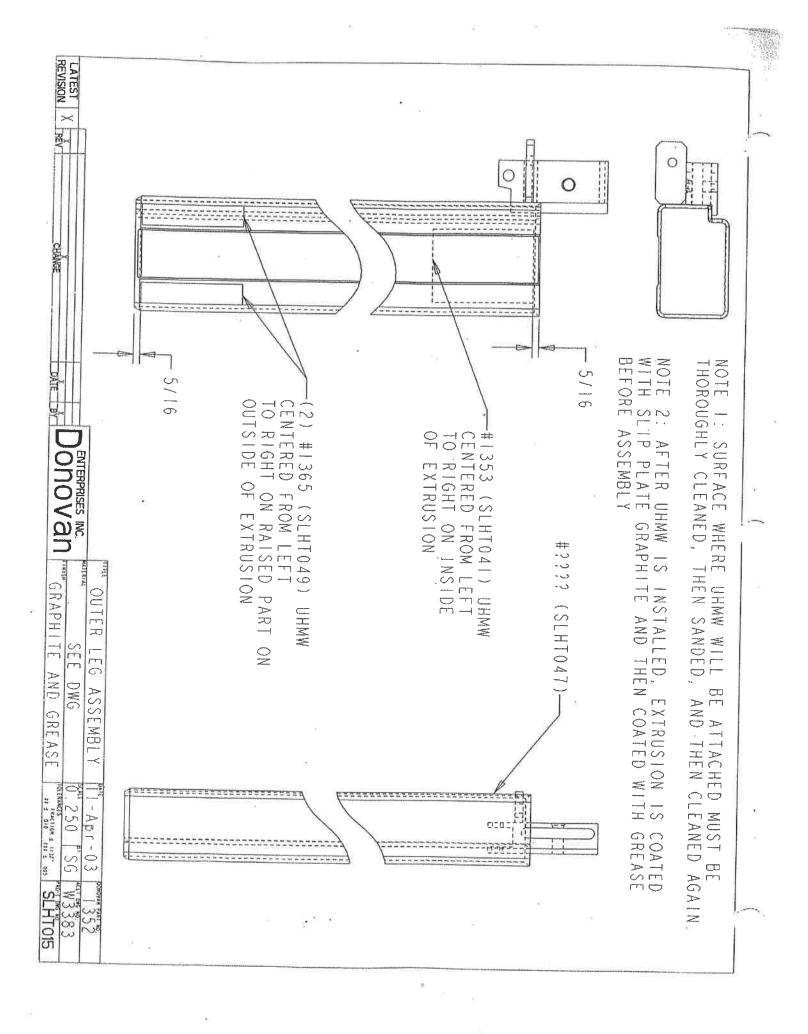


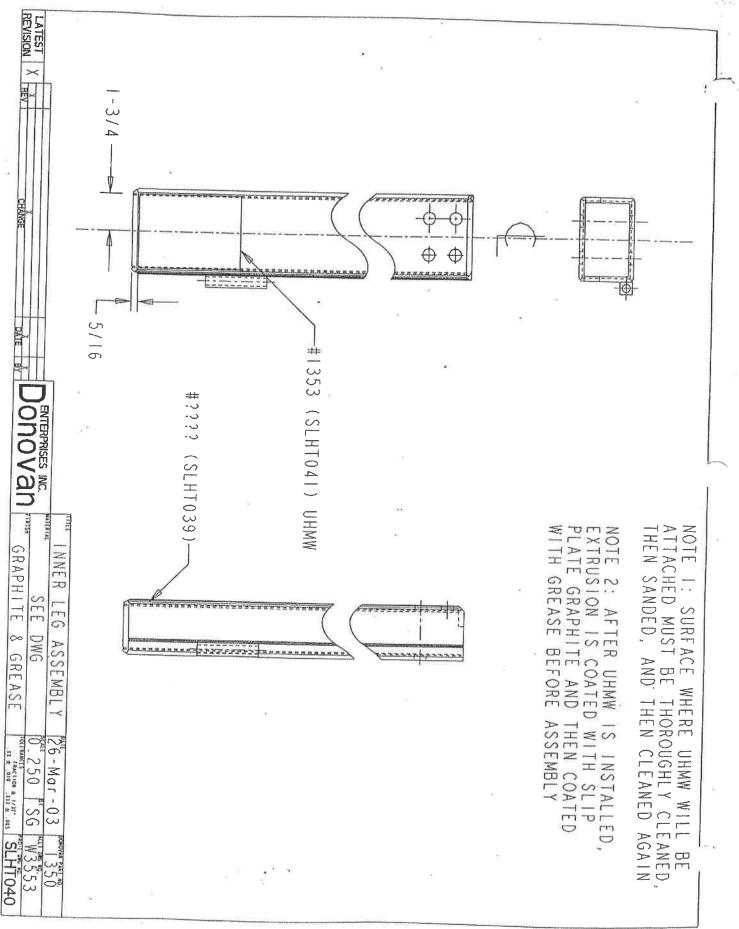
### **TEST OPERATION:**

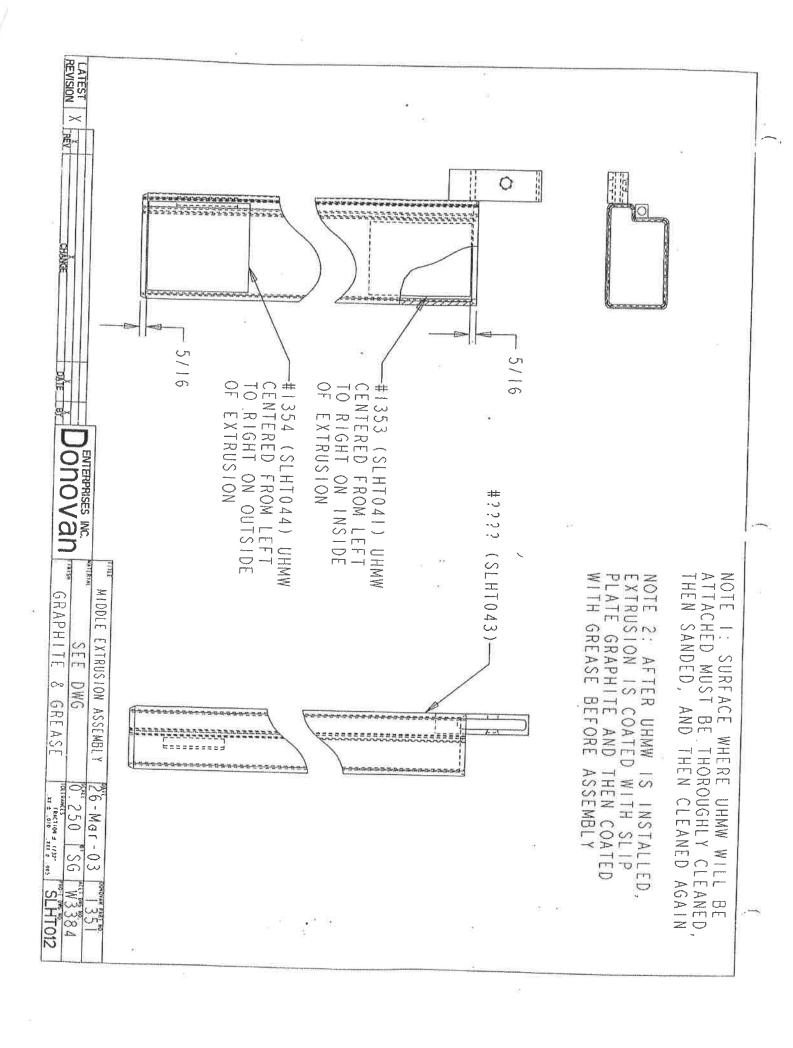
- When the Hy-Tower is raised approximately 1" (2.5 CM) the red light on the warning flasher should be blinking and the audible alarm will sound.
- Place the toggle switch in the "off" position and try to raise Hy-Tower. Hy-Tower hydraulic pump should not start. Always place the toggle switch in the "off" position when the Hy-Tower is not being raised or lowered.

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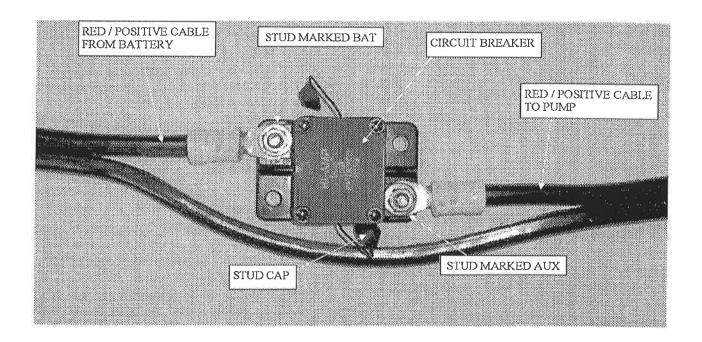
150 AMP July

## HI-AMP CIRCUIT BREAKER INSTALLATION INSTRUCTIONS FOR HYDRAULIC PUMPS

- 1. FIND A LOCATION CLOSE TO THE BATTERY TO MOUNT THE CIRCUIT BREAKER.
- 2. NEXT, CUT THE RED / POSITIVE CABLE COMING FROM THE BATTERY TO THE HYDRAULIC PUMP.

NOTE: USE A KNIFE TO SEPARATE THE RED / POSITIVE CABLE FROM THE BLACK / NEGATIVE CABLE. THIS WILL KEEP THE COATING ON EACH CABLE INTACT.

- 3. STRIP THE CABLE ENDS BACK APPROXIMATELY 3/8", AND CRIMP ON THE TWO TERMINALS PROVIDED.
- 4. ATTACH THE RED / POSITIVE CABLE FROM THE BATTERY TO THE STUD MARKED BAT, AND ATTACH THE RED / POSITIVE CABLE TO THE PUMP TO THE STUD MARKED AUX.
- 5. TIGHTEN THE NUTS, AND PLACE THE PROTECTIVE STUD CAP ON EACH STUD. CIRCUIT BREAKER INSTALLATION IS NOW COMPLETE

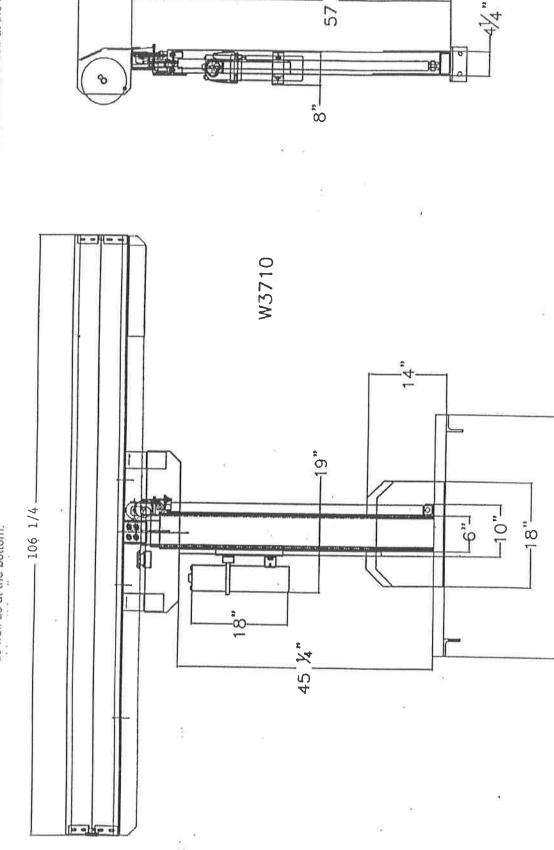


The bases of the Hy-Tower and the Hy-tower (SL) are about 4 ½" wide. We tell people that 6" or more clearance is

optimum, because it allows you space for bracing and gusseting.

Our housings are about 11" wide, which isn't an issue with cable hoists. On a cable hoist, if there is room for the base,

there is usually plenty of room for the housing. In the forward position, the container sits back far enough because of the stops on the rails. As the hoist raises, it also moves away from the cab, so it clears the housing there, too. Hooklifts are where the housing width needs to be taken into account. The housing sits about 4 ½ above the truck frame, so if you are dealing with a larger hook, you need to check the clearance between the hook and the cab at the top



42"-

Hy-Tower roller bar shaft repair if arrives with shaft extended

Ok, this is an easy fix....(10 minutes tops)

The shaft is 2 parts (male/female). The end that is sticking out right now we suspect is the short end. This is the end of the roller tube that does not have an instruction sticker.

Unscrew the three screws that are screwed directly into the roller tube ( not the ones in the end cap). They may have use loctite on the screws so you may have to tap on them to loosen them up.

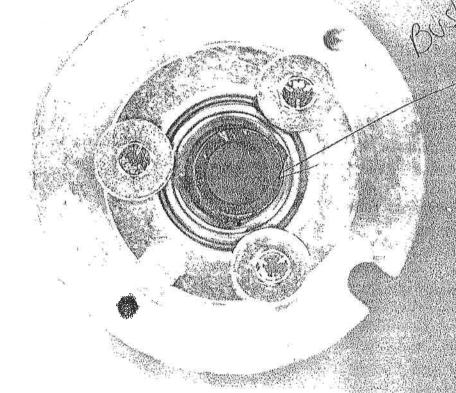
Pult out the whole cap and shaft.

You should be able to see the end of the other shaft. Slide the short shaft back into the roller tube and join the 2 shafts b together. One fits into the end of the other.

Slide the cap back into the end of the roller tube making sure that at least 2° of the shaft is sticking out of the bearing in the cap, apply loctite to the screws and tighten them down again.

To make sure the shaft doesn't silde out again, tighten the set screw in the bearing on the end cap.

Hy-Tower ENDCAP



HY-TOWER SL on a skid 48" wide X 120" long X 28" high -700 lbs

- 1.) Pump operates power up and gravity down. Pump motor will still run when comes down to assist it coming down as cylinder is double acting cylinder.
- 2.) TO GET HY-TOWER DOWN IF STUCK AND NOTHING BINDING:

Disconnect Hydraulic hose that cobbects to cylinder at pump end and put in container (hydraulic fluid will leak out).

DO NOT GET UNDERNEATH HOUSING- may come crashing down.

- 3.) Drain hole need to look underneath truck and make sure drain hole not plugged and if no drain hole then need to drill one. Make sure centered.
- 4.) Sticker on roller bar should be on drivers side-ratchet on drivers side arrow should point up and over. Roller bar rotates counter clockwise.
- 5.) metal counter balance on one side of housing to offset cables on other side of tower.
- 6.) Grease legs with white lithium grease



### **HY-TOWER**

1.) HOW HIGH DOES IT GO?

12 FEET ABOVE THE TRUCK FRAME FOR THE DOUBLE LEG HY-TOWER. 15 FEET ABOVE THE TRUCK FRAME FOR THE HY-TOWER (SL).

2.) HOW MUCH CLEARANCE?

6" OR MORE IS OPTIMUM. MUST HAVE MORE THAN 4 1/2" (Hooklift truck 12")

3.) HOW WIDE IS THE TARP?

96" WIDE (DOUBLE LEG HY-TOWER) 100" WIDE (HY-TOWER - SL)

4.) HOW HARD IS IT TO PULL OUT?

APPROX 13 LBS - 50 LBS RESISTANCE FROM START TO FINISH

5.) HOW DO YOU INSTALL IT?

VERY SIMPLE! SHIPS IN PRE-ASSEMBLED PARTS (LOWER ASSEMBLY, HOUSING ASSEMBLY WITH TENSION AND TARP ALREADY SET, AND PUMP). BOLT ANGLES TO FRAME, WELD CHANNEL TO ANGLES, WELD LEGS INTO CHANNEL, ADD EXTRA BRACING, BOLT ON THE HOUSING, MOUNT THE PUMP AND HOOK IT UP TO THE BATTERY. THAT'S IT!!

6.) WHAT KIND OF PUMP IS IT?

SELF-CONTAINED, HYDRO-ELECTRIC PUMP, 12 VOLT

7.) WHERE DO YOU GET YOUR HYDRAULIC FLUID?

SELF-CONTAINED IN THE RESERVOIR.

8.) HOW DO YOU CHANGE OUT THE TARP?

FOLLOW PRINTED INSTRUCTIONS

9.) WHAT IF MY DRIVER FORGETS TO PUT IT DOWN?

HY-TOWER COMES WITH A PROXIMITY ACTIVATED, WEATHER SEALED, INTERMITTEN FLASHING WARNING LIGHT TO ALERT THE DRIVER THAT THE TOWER IS RAISED.

10.) DOES DONOVAN PROVIDE THE GUSSETS OR BRACING PIECES?

NO. YOU CAN JUST USE SCRAP. EVERY TRUCK IS DIFFERENT.

11.) HOW DOES THE ALARM WORK?

PROXIMITY ACTIVATED. WHEN THE HY-TOWER RAISES APPROXIMATELY 2", THE CIRCUIT CLOSES AND THE LIGHT FLASHES. WHEN THE TOWER IS DOWN THE CIRCUIT OPENS AND THE LIGHT STOPS FLASHING.

12.) WHAT IF THE ALARM GETS MUD ON TY?

THAT'S OK! ACTIVATOR DOES NOT WORK BY CONTACT. ITS PROXIMITY ACTIVATED. IT IS SEALED TOO, TO PREVENT DIRT OR WATER FROM GETTING INSIDE.

13.) WHAT ABOUT THE WEATHER?

TESTED ALL THE WAY DOWN TO -20 F NO PROBLEM. CAN SPEED UP MOVEMENT OF CYLINDER IN EXTREME COLD TEMPS BY REPLACING HYDRAULIC FLUID WITH KEROSENE OR 10 WEIGHT MOTOR OIL.

14.) WHAT ABOUT ICY PAVEMENT?

REDUCE TENSION FOR EASIER PULL. HY-TOWER HAS A 50' PULL ROPE THAT ALLOWS THE DRIVER TO FIND SAFE FOOTING.

15.) WHAT ABOUT THE WIND?

OUR NEW LIGHTWEIGHT MESH TARP MAKES IT EASY TO OPERATE HY-TOWER EVEN ON WINDY DAYS.

POINT CAB INTO THE WIND AND ALLOW WIND TO HELP YOU TARP CONTAINER. IF CONTAINER IS NOT FACING WIND, PICK UP THE CONTAINER AND THEN FACE TRUCK INTO THE WIND.

16) WHAT ABOUT HEAPED LOADS?

HY-TOWER ALLOWS YOU TO RAISE THE TARP OVER PEAKED LOADS.

17) WHAT IS THE WARRANTY ON THE HY-TOWER?

THERE IS A LIFETIME WARRANTY ON THE ROLLER BAR SPRING.
ONE YEAR WARRANTY ON THE CYLINDER AND PUMP.
90 DAY WARRANTY ON ALL OTHER MECHANISM COMPONENTS AND TARP.

18) HOW IS THE CYCLINDER RATED?

THE CYLINDER IS RATED AT 2000 LBS, BUT ONLY LIFTS ABOUT 300 LBS IN ONE DIRECTION. THERE IS VERY LITTLE LOAD ON THE CYLINDER AND PUMP.

- 19) HOW MANY GALLONS PER MINUTE IS HY-TOWER SET TO RUN OFF OF?
  HY-TOWER IS SET TO RUN OFF OF ONE-GALLON PER MINUTE OF HYDRAULIC FLUID.
  THIS KEEPS THE TOWER FROM RISING OR LOWERING TOO SLOWLY OR TOO QUICKLY.
- 20) WHY SHOULDN'T YOU HAVE FLAPS ON YOUR HY-TOWER TARP? IS THERE AN EXCEPTION TO THIS RULE?

NINETY NINE TIMES OUT OF ONE HUNDRED, FLAPS ARE NOT NECESSARY ON THE HY-TOWER TARP AND ARE NOT RECOMMENDED. THEY MAKE THE TARP HARDER TO ROLL UP ON THE ROLLER BAR DUE TO THE ADDITIONAL MATERIAL. ALSO, IF THE CONTAINER IS ON THE TRUCK AND IS COVERED WITH A TARP WITH FLAPS, THE DRIVER HAS TO CLIMB UP ON THE CONTAINER TO RELEASE THE FLAPS. IF A CUSTOMER HAS A GOOD REASON TO HAVE FLAPS ON THEIR TARP, WE CAN SUPPLY THEM WITH ONE.