



Model:
AVAL8219
AVAL8422

DETAIL K2 INC.



DK2 Snowplow

Instruction manual
Manuel Français au verso

STOP!

Questions, problems, missing parts? Do not return to your retailer.

Please call our customer service department at: 1(888) 277-6960. Our customer service staff are ready to provide assistance. If a part is damaged or missing, replacement parts can be shipped from our facility. For immediate help with assembly, or for additional product information, call our North American toll-free number: 1(888) 277-6960.

Save this manual

You will need this manual for safety instructions, operating procedures, and warranty.
Put it and the original sales invoice in a safe, dry place for future reference.

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THANK YOU FOR PURCHASING A K2 PLOW!

This snowplow is designed for residential snow removal.
Please remember to use the right tool for the job at hand. Avoid overtaxing your snowplow.
Take care using it to clear thick, heavy (wet) snow.

Your K2 snowplow is not intended to clear the snow deposits created by large municipal or commercial snowplows, which contain heavy compacted, frozen lumps of snow and ice, and could damage the plow and vehicle.

If you have any questions or problems with your Detail K2 snowplow, including set-up difficulties, broken or missing parts, etc.), do not return product to the store. Please call our toll-free service line at 1(888) 277-6960 to speak to a technician. Detail K2 Inc., 1080 Clay Avenue Unit #2, Burlington, Ontario, L7L 0A1 Canada
We reserve the right to change product design and specifications without notice or obligation.



IMPORTANT: *Read safety rules and instructions carefully before operating this equipment.*



CAUTION: **SAFETY FIRST**— *Read this manual carefully before operating your snowplow. We recommend that you read this manual completely so that you are fully aware of all important safety recommendations. Record your serial number.*



DANGER: *This equipment was built to be operated according to the rules for safe operation in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. This machine is capable of amputating hands and feet. Failure to observe the following safety instructions could result in serious injury or death.*

To use this equipment properly, you must observe the safety regulations, the assembly instructions and the operating instructions to be found in this manual. All persons who use and service the snowplow must be informed about its potential hazards and must be acquainted with this manual. Children should be supervised at all times if they are in the area in which the snowplow is being used. It is also imperative that you observe the accident prevention regulations in force in your area. The same applies for general rules of occupational health and safety.

GENERAL

1. Read your owner's manual carefully. Get to know your snowplow and familiarize yourself with its applications and limitations.
2. Use the snowplow according to the guidelines in this manual. Do not abuse it or force it to do a job for which it was not designed.
3. Use only original equipment parts and accessories. Consult the owner's manual. The use of incorrect accessories may produce unforeseen hazards.



WARNING: *Make no attempt to assemble and operate the snowplow until you have thoroughly read this manual and completely understood its contents. Operating your DK2 snowplow improperly can result in serious personal injury and/or damage to both plow and vehicle. Since Detail K2 Inc. does not complete its assembly or installation, we cannot be held responsible for any personal injury or damages that product misuse may produce.*

PERSONAL SAFETY

1. For safety, keep children and pets at a distance from the plow and the operating area.



DANGER! *Sitting or riding on the snowplow is extremely dangerous. This could inflict serious injury.*



WARNING! *Never stand between the vehicle and the blade nor stand within 3 m (10 feet) of a blade in motion. Moving or falling blades can cause serious personal harm.*



WARNING! *At all times, keep your hands and feet clear of the blade and winch.*

2. Make it a practice to completely lower the blade to the ground every time the vehicle is parked. A raised blade may drop unexpectedly and this can result in serious personal injury.

IMPORTANT SAFE OPERATING PRACTICES

WARNING! *When mounting or removing the snowplow, keep hands and feet clear of the blade, mounting assembly and winch. Moving or falling assemblies have a potential to cause personal injury. Never use your finger to check alignment. Moving or falling assemblies could crush your finger.*



CAUTION: *Transport speed should never exceed 70 km/h (45 mph). Adverse travel conditions may dictate a further speed reduction. Must use appropriate driving lights*



3. Wear a seat belt when plowing snow. Hidden obstacles could make the vehicle stop suddenly, resulting in personal injury.
4. Put the vehicle in park or into gear and remove the ignition key to prevent others from starting the vehicle when installing or servicing the plow.
5. Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing, and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts. For warmth, wear layers of clothing, taking off layers as you get warmer.
6. Wear safety goggles when working under the hood of the vehicle. for eye protection from battery acid, gasoline, dirt and dust. Everyday eyeglasses have only impact resistance lenses. They are not safety glasses.
7. For work connected with the vehicle, avoid touching any hot surfaces such as the engine, radiator, hoses and exhaust pipes.
8. Always have a fire extinguisher, rated BC, handy for flammable liquid and electrical fires.
9. Do not plow snow with your head out the window. Sudden stops or protruding obstacles could result in personal injury.
10. The driver only should be in the vehicle when plowing snow.

SNOW PLOW

1. Maintain the snowplow and keep it clean and lubricated. This applies even when the unit is not in use so as to avoid corrosion. In the off season, inspect the unit and apply corrosion-resistant paint to any areas that show corrosion to prevent further damage. If stored outside, cover the winch assembly.
2. Carefully inspect your snowplow before every use. Particularly check the alignment of moving parts and tighten any loose screws and bolts.
3. This unit is not intended for commercial use.

WARNING! *Carefully inspect all snowplow components and bolts for looseness, wear and damage when mounting or removing the unit and before transporting it.*



4. With heavier full-sized vehicles, mainly through momentum, it may be easier to damage the plow assembly. Cautious use will help extend your years of trouble-free service.

VEHICLE

5. Do not attempt plowing snow at speeds above 15 km/h (10 mph). Driving at speeds above 15 km/h (10 mph) with the plow attached reduces the cool air intake and may cause your vehicle engine to overheat.
6. Do not overload the vehicle. Take into account the loaded vehicle weight, including the entire snowplow assembly, all accessories, driver and passenger, fluids, and cargo. This weight is not to exceed the front/rear Gross Axle Weight Rating (GAWR), and total Gross Vehicle Weight Rating (GVWR). The specific ratings for your vehicle are noted on the safety compliance certification label attached to the driver's side door opening. Rear ballast weight may be necessary to prevent exceeding the front GAWR.

IMPORTANT SAFE OPERATING PRACTICES



CAUTION: *The installation of a snowplow may have a bearing on the warranty for your vehicle. For more information, please carefully consult your vehicle's owner's manual or your vehicle dealer.*

7. The sudden jarring stop incurred when hitting hidden obstacles in the snow could trigger release of your vehicle's airbags. Consult your vehicle manual or your vehicle dealer to mitigate this.
8. Should it become necessary to place the vehicle on a hoist, first remove the blade assembly.

DRIVING



CAUTION: *Always be certain the quick-mount locking plates on your custom front mount are secured. If the plow is insecurely attached to the mount, it will likely pull away from the vehicle, fall off and cause significant damage and/or injury.*

1. The use of lights is recommended, if not required by local regulations, while plowing at night. Regular vehicle headlights will likely be obscured by the blade.
2. Do not drive on public roads with the snowplow attached at the front of your vehicle.
3. Connect a safety hook when transporting the snowplow in the raised position.
4. Do not attempt to change the blade position while traveling as you could accidentally suddenly lower the plow blade.



WARNING! *Consult local/ provincial laws regarding vehicle restrictions that might apply when the snowplow is not attached. Such restrictions may mandate the removal of the mounting, lift frame, lift arm, winch mechanism or any other protruding elements mounted to the front of the vehicle during certain times of the year.*

PREPARATION

NOTE: *Apply waterproof grease to all moving parts and assemblies*

1. Thoroughly inspect the area where the equipment is to be used. Make yourself familiar with the terrain you are plowing and avoid all obstacles.
2. Remove all foreign objects such as doormats, newspapers, sleds, boards, wires, and other items.
3. Before use, ensure that the plow is attached to your custom front mount and safely secure the quick mount locking plates.
4. Stay away from any obstacles. Familiarize yourself with the area and potential difficulties before plowing.
5. Never attempt to make any adjustments while vehicle is running, except where specifically recommended in the operator's manual(s).
6. Exercise caution when changing direction and while operating on slopes.
7. During continuous snowfalls, plow as snow builds to between 8 and 15 cm (3 and 6").
8. Plan your snow plowing pattern to avoid discharge towards windows, walls, cars, etc., thus avoiding possible property damage or personal injury. Never direct discharge at children, bystanders, and pets nor allow anyone in front of the plow.

OPERATING SAFETY

1. Keep bystanders, helpers, pets and children at least 8 metres (25 feet) from the plow while it is in operation. Stop using it if anyone enters the area. Never allow children to operate it.
2. Never allow anyone to ride on the plow in operation. Sitting on it may lead to serious injury.

IMPORTANT SAFE OPERATING PRACTICES

3. Do not overload plow capacity by attempting to clear snow at too fast a rate.
4. Never operate this machine without good visibility or light. Extra lighting is highly recommended and, depending on the jurisdiction, may be required on roadways for nighttime plowing.
5. Never operate the plow at high transport speeds over 16 km/h (10 mph). Above this speed, vehicle engine overheating may also occur.
6. Exercise caution, especially when operating in reverse.
7. Do not operate without wearing adequate winter outer garments. Do not wear jewelry, long scarves or other loose clothing which could become entangled in moving parts. Wear footwear which will improve footing on slippery surfaces.

WARNING: *Restrict the use of this plow to persons who read, understand and follow the warnings and instructions in this manual and on the machine.*



WARNING: *The warnings, cautions, and instructions detailed in this manual cannot cover all possible conditions and situations that occur. It must be understood by the operator that COMMON SENSE AND CAUTION ARE FACTORS that cannot be built into this product, but MUST BE SUPPLIED BY THE OPERATOR.*



WARNING: *DO NOT OPERATE this equipment until it has been assembled and set up according to the instructions in "Snowplow Assembly". Read and follow all safety rules within this Instruction Manual. Failure to do may result in serious personal injury.*



SPECIFICATIONS

- Blade dimensions:
 - AVAL8422: 2.1 m wide x 56 cm high (84 inch x 22 inch)
 - AVAL8219: 2.08 m wide x 48 cm high (82 inch x 19 inch)
- Fits most light trucks and SUVs
- Easy attachment: slides into your custom mount
- Electric winch with wired remote control for easy up and down snow control
- 3 locking angles: to either side or straight ahead
- Steel construction powder coated with UV-protected paint
- Castors allow attachment and removal in seconds, plus roll-away storage
- Comes with:
 - 3,000 lb. wireless winch
 - hardened steel cutting edge
 - rubber snow deflector
 - polymer plow markers
 - skid shoes
- ISO 9001 certified manufacturer
- Assembled weight :
 - AVAL8422: 134.26 kg (296 lb.)
 - AVAL8219: 130.63 kg (288 lb.)
- 1 year warranty

VEHICLE REQUIREMENTS



WARNING! Always inspect snowplow components, connections, and fasteners for wear or damage every time you attach or detach the snowplow. Worn or damaged components may allow the snowplow to fail without warning, resulting in serious injury or vehicle damage.

VEHICLE RECOMMENDATIONS

The vehicle with the snowplow installed must comply with applicable motor vehicle safety standards and with the vehicle manufacturer's stated gross vehicle and axle weight ratings (found on the driver's side door corner post of the vehicle) as well as the front and rear weight distribution ratio. In some cases, rear ballast may be required to comply with these requirements. (See Ballast Requirements below.) The weights of front seat occupants can be adjusted above 136 kg (300 lb.), but the total vehicle weight with snowplow must not exceed vehicle GVWR or GAWR. Installation, modification and addition of accessories must comply with manufacturers' and regulators' published recommendations and instructions. Available capacity decreases as the vehicle is loaded with cargo or other truck equipment or as snowplow accessories are installed. If there is uncertainty as to whether available capacity exists, the actual vehicle as configured must be weighed.

BALLAST REQUIREMENTS

Because of the front/rear axle weight ratio, ballast (additional weight) is important in qualifying vehicles for snowplow eligibility. Rear ballast must be used when necessary to remain in compliance with axle ratings and ratios as specified by the vehicle manufacturer.

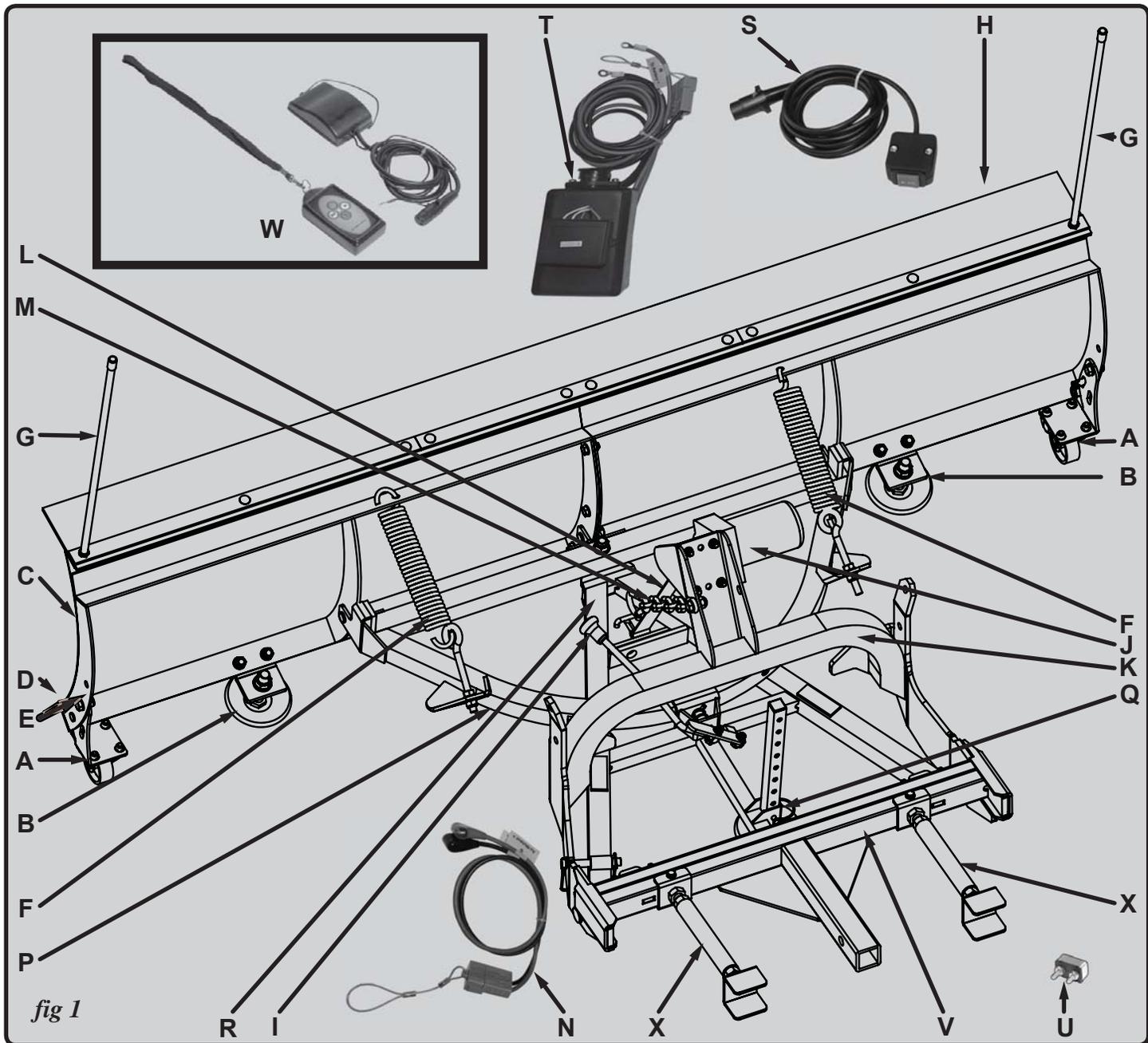
Ballast, if required, must be retained correctly behind the rear axle, distributed evenly across the width of the vehicle. The weight of the ballast retainer should be considered part of the ballast weight. We recommend sand bags for ballast.

INSTALLING A SNOWPLOW MOUNT TO YOUR VEHICLE

Your Avalanche snow plow kit requires a standard 2" class III front mount receiver hitch that is sold separately. DK2 does not sell these front mount hitches but would be glad to help you find one. Please call us at 1-888-277-6960.

FUNCTIONAL DESCRIPTION

ENGLISH



I.D.	Name	Function
A	Fixed castor (2)	carries the weight of the plow during mounting, dismounting, and storage
B	Skid shoe (2)	holds the scraper edge at a set height during plowing
C	Blade	pushes and channels the snow away
D	Scraper	provides a hardened steel cutting edge for long life
E	Castor height adjustment pin	allows castors to be set at vehicle height for mounting /dismounting and retracted for plowing
F	Trip spring (2)	allows blade to trip forward when hitting obstructions, absorbing shock to plow, vehicle, and operator
G	Marker (2)	brightly coloured to locate the extreme outside corners of blade in blowing snow or low visibility
H	Rubber snow deflector	reduces snow blown over top of blade onto vehicle windshield

FUNCTIONAL DESCRIPTION

I.D.	Name	Function
I	Blade angle locking handle	operates blade angle locking pin to allow blade to move between 22 and 38 degrees right or left, or straight across
J	Winch	raises and lowers the blade
K	Main frame	Holds the winch and connects to the a-frame and your custom mount
L	Lift strap	connects the winch to the blade
M	Safety chain	holds the blade in raised position for transport
N	Wiring harness	carries power for winch
P	D frame	carries the blade and holds its angle to direction of travel
Q	Back support	carries the weight of the plow during mounting, dismounting, and storage
R	A frame	main frame mounting plow to vehicle
S	Winch control switch with lead	operates the winch and therefore the plow, up and down from within the vehicle
T	Winch control box	supplies power to the winch as commanded by the winch control button
U	Circuit breaker	protects winch and vehicle electrical system
V	T Frame Cross Member	inserted into the 2" front mount receiver
W	Wireless Remote Conversion Kit	order as WR100
X	Blade Support Arms	added strength by improving your mounting connection from one point to three



fig.2

SNOWPLOW ASSEMBLY

1. Carefully unpack the carton (fig.2), accounting for each of the parts by referring to the function picture, parts list and schematic drawing (see page En.21)
2. Continue to refer to the parts list and exploded drawing while assembling the plow.
3. Using the grade 8 bolts and nuts included, bolt together the two halves of the snowplow blade (fig.3, C^L and C^R, below).



fig.3



fig.4

4. Attach the scraper (three pieces, a long, S^L and two short ones, S^S; fig.4, at left) to the front lower edge of the full blade using 25 mm (1") x M10 grade 8 carriage bolts, 10 mm washers, and M10 Nylock nuts (fig.5). The long piece of the scraper overlaps both halves of the blade. The shorter piece fills in the rest. The carriage bolts are inserted so that their domed caps are at the front of scraper, which lies on the lower front (concave side) edge of the blade. The nuts screw on from the back (convex) side of the plow blade. Tighten the nuts.



fig.5

SNOWPLOW ASSEMBLY

ENGLISH

5. Attach the two skid shoe holders (fig.6) to the bottom of the lower cross rib on the back of the plow blade. They should be attached so that they are cupped upwards, the ends of the holders with the two holes angled slightly when the blade stands vertically and the end having the single large hole aligned horizontally so that the shoes are vertical. To attach each, use 2 M12 x 32 mm gr.8 hex head bolts inserted from below, and 2 M12 Nylock nuts threaded on from the top to attach it to the cross rib.

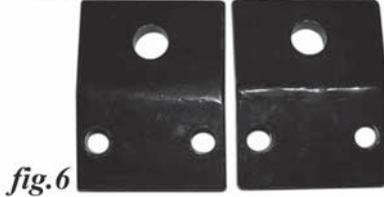


fig.6

6. If not already done, thread an M18 nut onto the shaft of each skid shoe (fig.7). Assuming the blade assembly is held in a vertical position, insert the skid shoes into the skid shoe holders from below. Hold them in place with a Nylock nut on top of each (fig.8). Temporarily set the shoes so they hold the blade scraper about 1 cm (1/2 inch) above the surface. This is the normal setting for paved surfaces, but you can vary the height according to conditions.



fig.7

7. Assemble the D frame (fig.9) on top of the A frame (fig. 10). With the rounded portion of the D frame held so it slides under the angle bracket (a, fig.10) on top of the A frame and the centre hole engages the angle locking pin (12, fig.10), connect the two frames using the pivot bolt. This is a 75 mm (2.95") M6 gr.8 hex head bolt with a 16 mm washer (8, fig.10), inserted from below the hole in the apex of the "A" of the A frame, through the pivot bolt sleeve. It goes up through a hole in the centre of the straight side of the "D" in the D frame. Hold this in place with an M16 Nylock nut. (fig.11, below)

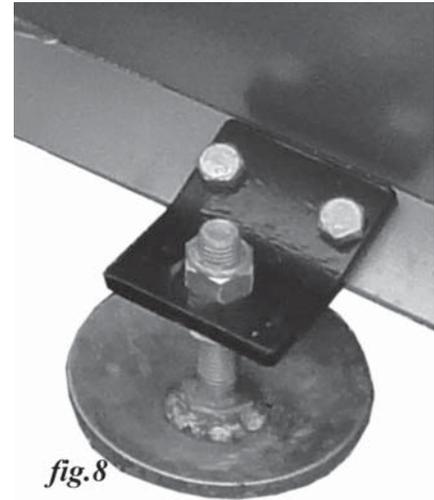


fig.8



fig.9

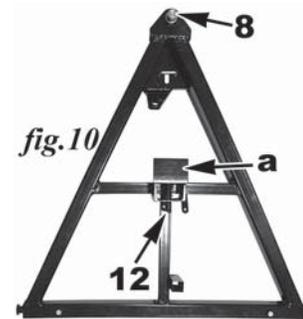


fig.10



fig.11

SNOWPLOW ASSEMBLY

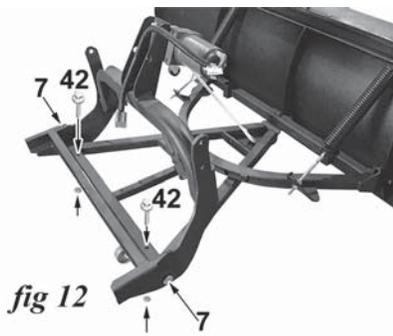


fig.12



fig.14

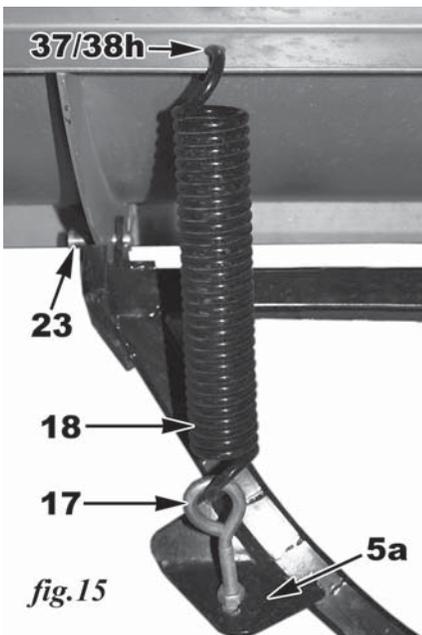
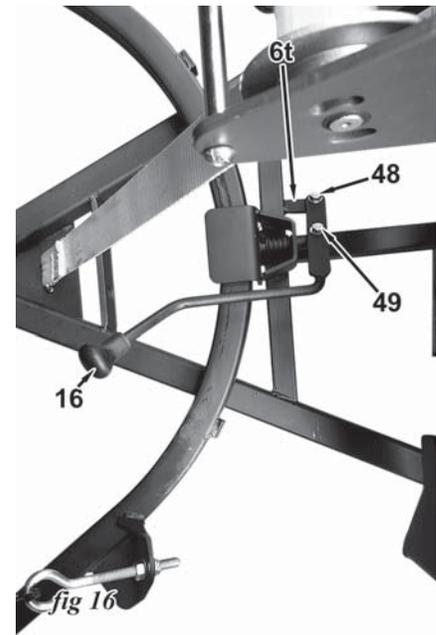


fig.15

8. Attach the main frame to the A frame using the two frame pins (7, fig 12). Lock the pins into the A frame with an M8 x 52 mm gr.8 hex head bolt (42, fig 12) inserted through an 8 mm washer, then the top of the frame at each end and secured with M8 nylock nuts.
9. If not already attached, bolt the winch to the top of the main frame with 4 M8 x 30 mm gr 8 hex head bolts, 8 mm washers, and M8 Nylock nuts; the bolts being inserted from the front through the winch base
10. Remove the gr.8 U-bolt from the top of the A frame, attach the lower end of the winch strap to it and re-attach. The strap should feed over top of the barrel of the winch toward the front and down to the attachment point on the A frame. (fig.13). The U-bolt should not be tightened fully. It should have a little play.
11. Align the D frame's 3 attachment points with the two vertical centre ribs of each plow blade panel as well as the double, joined vertical ribs in the middle of the plow (fig.14). Insert clevis pins through each attachment point and the vertical ribs on the back of the blade. Secure the clevis pins (23, fig.15) in place with cotter pins and bend them so they remain in place.
12. If not already done, attach the 2 flip-down fixed castors to the inside edge of the last ribs on each end of the snow plow blade by bolting them to the rib. When plowing make sure to flip castors up and insert the pin to avoid damage while plowing.
13. Attach the skid plate (PART 57, Rear shoe support with foot) to the A frame by inserting up from below through the skid plate holder. Use the adjustment pin to set the height. Make sure to remove this rear shoe support with foot when plowing.
14. Hook the trip springs (18, fig.15) into the holes in the top cross rib at the back of each plow blade panel (37/38h, fig.15). Attach the springs to the angle plates on the D frame (5a, fig.15) using for each an M12 gr.8 eyebolt (17, fig.15), M12 nut, 2 12 mm washers and an M12 Nylock nut.
15. Tighten the Nylock nuts to the point where the springs are just tight. Then turn the Nylock nut, shortening the take-up by 6 mm (1/4 inch) further so the springs open slightly. Snug up the inner M12 nut to hold the assembly tight.

SNOWPLOW ASSEMBLY

16. Assemble the blade angle locking handle with knob to the A frame so that it operates the spring-loaded angle lock pin in the bracket on top of the A frame smoothly. Bolt the end of the handle opposite the knob (16, fig.16) to the eye in the small tab in the A frame's centre cross piece (6t, fig.16) with an M8 x 25 mm gr.8 bolt (48, fig.16) and 2 x 8 mm washers. Secure with an 8 mm Nylock nut. Bolt the handle to the hole in the angle lock pin with an M8 x 35 mm gr.8 bolt (49, fig.16) and 2 x 8 mm washers. Secure with an 8 mm Nylock nut.
17. Attach the snow deflector to the top flange of the plow. Place the deflector rubber along the top angle of the plow blade. On top of that place the short and long metal deflector battens. Bolt them into place with 7 M10 x 25 mm carriage bolts down through all but the two end holes. In the end two holes, insert the threaded ends of the two snowplow marker wands. Secure all with 9 x M10 Nylock nuts threaded on from below the flange.
18. Using two bolts and nuts, attach the light bar with the two lights to the top edge of the winch support tower.
19. Connect the safety chain to the bottom of the winch mounting plate with the threaded quick link. During transportation with the plow blade raised, the clip hook should fasten to the hole in the angled tab just behind the strap attachment point in the apex of the A frame, preventing the plow blade from falling should anything fail.
20. It is normal for the whole assembly to rock back and forth when mounted, with the plow blade moving side to side from 20 to 25 cm (8 to 10 in.) This compensates for differences in terrain between the surface the plow rides on and what the vehicle is riding on. This flexibility should not be reduced.
21. Insert the t-frame (PART 62) into the main frame and secure the tabs using the safety clips (PART 61).



ELECTRICAL INSTALLATION

CAUTION! Before working on the winch or the wiring in your vehicle, disconnect the battery and any other power sources.



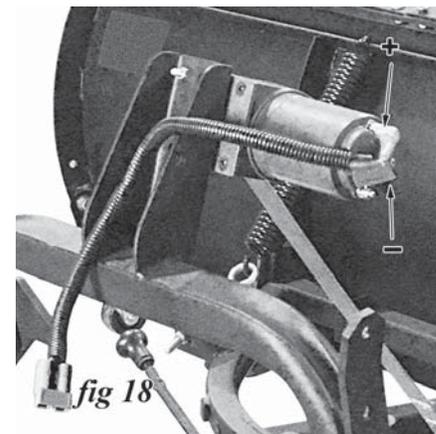
CAUTION! For work connected with the vehicle, avoid touching any hot surfaces such as the engine, radiator, hoses and exhaust pipes.



WINCH LEADS



1. Connect the winch leads, tagged "To Motor", to the contacts on the winch motor as shown. [winch leads photo] Be sure the rubber caps cover the connections well to prevent water entry. The red lead should be connected to the positive (+ upper) terminal on the winch, and the black lead connected to the negative (- lower) winch terminal.
2. Lay the red and black leads down along the winch support tower, using nylon ties to secure them in place.
3. Use a nylon tie to retain the short cable leash on the blue 2" connector plug cap to the winch support tower.



SP3000 WINCH WIRING DIAGRAM

ENGLISH

On Your Plow

CAUTION: Before working on the winch or the wiring in your vehicle, disconnect the battery and any other power sources.

NOTE: The 35 amp circuit breaker is necessary to prevent possible electrical damage to either the winch or the vehicle's electrical system.

NOTE: Apply electrical contact grease to all connections to prevent corrosion

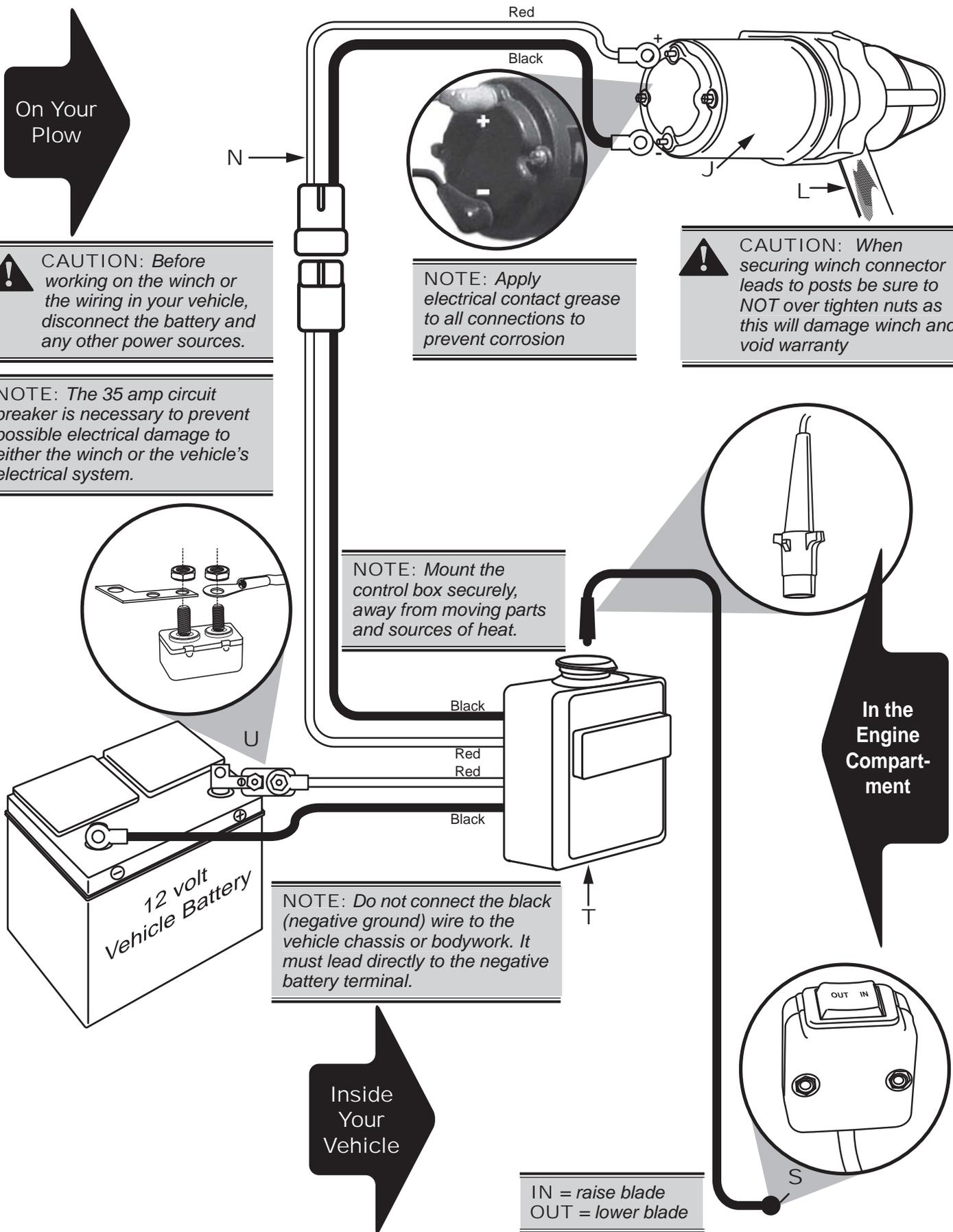
CAUTION: When securing winch connector leads to posts be sure to NOT over tighten nuts as this will damage winch and void warranty

NOTE: Mount the control box securely, away from moving parts and sources of heat.

NOTE: Do not connect the black (negative ground) wire to the vehicle chassis or bodywork. It must lead directly to the negative battery terminal.

Inside Your Vehicle

In the Engine Compartment



IN = raise blade
OUT = lower blade

OPERATING PROCEDURES

CONTROL BOX

The control box includes a transponder that can connect it wirelessly to a wireless remote control switch (optional at extra cost). There is also a hard-wired manual winch control switch (y, fig.19) included to operate your plow.

1. Attach the control box (s, fig.19) to the vehicle in the engine compartment. Mount it securely, away from moving parts and sources of heat. Take into account the amount of wire available to reach the vehicle battery and the amount of wire available to connect to the winch leads.
2. Run the red (p, fig.19) and black wires (n, fig.19) attached to the blue 2 inch connector plug (v, fig.19) forward to a point outside the front of the vehicle near the custom mount, where the plug can easily be connected to the plow lead. Leave some slack.
3. Run the red and black wires marked "To Battery" to the battery. The black wire should be connected directly to the negative terminal of the battery.



NOTE: Do not connect the black (negative ground) wire to the vehicle chassis or bodywork. It must lead directly to the negative battery terminal.

4. The red wire must be connected to the positive terminal of the battery with an intervening in-line 35 amp circuit breaker (w, fig.19) or fuse. The 35 amp circuit breaker is necessary to prevent possible electrical damage to either the winch or the vehicle's electrical system.

WARNING: If there is a DK2 wireless controller in the immediate vicinity of the control box, it can operate your plow's winch. Be aware there is danger of unexpected movement of the winch and blade.



5. Run the hard-wired control lead so that the switch (y, fig.19) goes into the cab of the vehicle and the plug (u, fig.19) connects to the socket in the top of the control box (t, fig.19).

WARNING: Never stand between the vehicle and the blade nor stand within 3 m (10 feet) of a blade in motion. Moving or falling blades can cause serious personal harm.



OPTIONAL LIGHT KIT

Wiring for the optional snowplow lights must be run and connected separately, either connected to the vehicle auxiliary lighting or separately switched. Switching for the light bar is at the top of the winch support tower.

CAUTION! Be sure that the snowplow lights are properly aimed when the snowplow is mounted on the vehicle, since its weight and the weight of any ballast will affect the way the vehicle sits on the road.



OPERATION

WARNING!

- Always inspect snowplow components, connections, and fasteners for wear or damage every time you attach or detach the snowplow. Worn or damaged components may allow the snowplow to fail without warning, resulting in serious injury or vehicle damage.
- Before plowing the first time, be sure all fixtures, connections, and parts are tight and properly aligned.



1. Lift the plow using the control for the winch.
2. The plow angle can now be adjusted using the handle to release the angle lock pin from the holes in the D frame. Move the handle away from the blade toward the front of the vehicle and then rotate the blade and D frame. The plow can be

OPERATION

- positioned at an angle to the left and to the right of the line of travel or straight across the front of the vehicle. Releasing the handle will allow the spring-loaded pin to fall into the appropriate hole in the back of the D frame to hold its position
3. After the first use, it is recommended that all bolts in the assembly are checked and re-tightened.
 4. 2-wheel-drive vehicles and some others may have lower clearance. This will likely be further reduced by the front mount as well as the added weight of the plow. You may feel it helpful to adding spring height or increasing tire size to provide extra clearance needed. Though plowing ability will not be affected, because of its extension ahead of the front wheels, there is an increased likelihood of catching the plow assembly on raised or uneven surfaces.
 5. This plow was intended to ease the clearance of newly fallen snow. The DK2 Snow Plow is not intended to clear the snow deposits created by large municipal or commercial snowplows, which contain heavy compacted, frozen lumps of snow and ice, and could damage the plow and vehicle. Do not use it for removing or pushing excessive amounts of snow, nor for ice, sand or gravel.
 6. Mainly because of the design of the blade elevation and lowering mechanism, back-dragging with this unit is not practical nor recommended.



WARNING! *With heavier, full-sized vehicles, mainly through momentum, it may be easier to damage the plow assembly. Cautious use will help extend your years of trouble-free service.*

PLOWING INSTRUCTIONS

The DK2 Snow Plow is intended for light personal use. It will effectively remove snow from parking lots, lanes, and driveways.

To ensure long life for your snow plow, please observe these fundamental instructions and notes:

1. Before beginning to plow, always check the main frame and the custom mount are correctly installed and secured using the two quick mount locking plates. Pull strongly forward on the plow. It should not move out of the front mount.
2. In heavy, continuing snowfalls, do not delay; plow regularly every 8 to 15 cm (3 to 6 inches) of snow accumulation. With heavy, wet snow increase the frequency.
3. To plow higher snow drifts, raise the blade and remove layer of snow from the top, lowering the blade by degrees on successive passes until the full depth is removed.
4. Do not allow the snow to become icy. Plowing immediately after each snowfall reduces the possibility the plow be used to break through ice.
5. Be familiar with the area being plowed or have someone who is familiar point out hazards. Exercise caution because hidden obstacles can inflict severe damage to both plow and vehicle.
6. Keep a distance of a metre (3 ft.) from obstacles such as building walls, telephone poles, and gates because the vehicle may slip sideways and cause the plow to contact them.
7. Ramming into a pile of snow will void your warranty and may cause damage to your vehicle. This plow is not designed for ice blocks
8. Do not attempt plowing snow at speeds above 15 km/h (10 mph). Faster may overload the unit or contribute to loss of control of the vehicle.
9. Should the plow appear to hop when plowing, a reduction in speed is recommended.
10. The DK2 Snow Plow will, by design, trip forward if overloaded or on striking an obstacle buried under the snow. The trip springs will then pull it back to the correct position. Before carrying on with caution, it is prudent to search out any hidden obstacles.

OPERATION

11. Before backing up, elevate the plow.
12. Make it a practice to lower the blade to the ground every time the vehicle is parked.
13. Do not leave the plow mounted on the vehicle between uses. It is easy to remove and re-attach.
14. Do not let ice and snow build up on the winch. Clear it off frequently so the blade's raising and lowering functions are not impeded. If stored outside, cover the winch assembly.
15. NOT DESIGNED FOR TRANSPORTATION ON PUBLIC ROADS. In most jurisdictions, driving on highways with a plow attached to your vehicle requires a lighting kit with turn signals as well as a safety retention chain to prevent the plow falling off the vehicle. Consult local regulations.

NOTE: Travelling at speeds above 15 km/h (10 mph) with a plow attached obstructs the vehicle's cool air intake and may cause engine overheating.

PLOWING LANES

NOTE: Always begin the season plowing lanes as widely as you can. As the season progresses, maintenance of lane width is easier if there is room to move the subsequent snowfalls to.

Procedure:

- Set the plow at an angle and move down the lane pushing the snow as close as possible to the edge where the snow will be piled. Stay clear of any ditches, trees, buildings and other obstacles along the lane.
- When you reach the end of the lane, turn the vehicle around and return going down the other side of the lane, building up a second pile of snow, without changing the angle of the plow.
- Run along the edges again, repeating this action and push the snow pile back incrementally further on each pass.

PLOWING PARKING LOTS

NOTE: Always begin the season plowing parking lots as widely on all sides as you can. As the season progresses, maintenance of the width of the cleared area is easier if there is more room to move the subsequent snowfalls to.

Procedure:

- As a rule, plow outward from the centre to one edge, then start again from the centre and plow outward to the other side.
- Set the plow at 38° and drive down the centre of the parking lot to the far side.
- Stop before ramming the snow pile. Do not use the plow to stack the snow.
- Raise the plow blade.
- Reverse to the spot you started from.
- Plow an overlapping run parallel to the first.
- Raise the plow and continue in the same vein until one half of the parking lot is cleared.
- Get out and re-set the plow to 38° on the opposite side.
- Starting from the centre again, plow overlapping strips towards the other edge of the parking lot.

TIPS AND TRICKS

Staking – Before snow even begins to fall, use stakes or wands to mark the edges of places that need to be plowed, so that you can plow safely and neatly without damaging the surrounding lawns and gardens. You can also mark hydrants, utility boxes, gas meters, sewer vent pipes, etc.

OPERATION

Drains – Through the season, ensure driveway drains remain clear and unobstructed, allowing snow an escape when it melts and less opportunity to re-freeze.

Speed – Plowing requires a safe, manageable speed limit, generally 15 km/h (10 mph). Faster speed reduces your visibility by pushing or blowing snow onto the windshield. If you hit an obstruction while plowing, the faster you're going, the greater the potential for personal injury or damage to equipment.

Plan – Think of the season ahead when determining where to push snow. Start snow banks back far enough that you have room for future snowfalls. Also, try to push snow away from buildings first, if possible.

Stacking – As you near the far side of the lot, reduce speed and raise the blade to prevent scraping turf, as well as to help stack the snow. Do not stack snow with the blade set at an angle.

Overloading – Allow the snow depth and water content to determine the width of your pass, or how much blade overlap you use for each pass. Move just enough snow with each pass to clear efficiently without overloading your equipment the plow or vehicle.

Back-dragging – A common technique used in plowing driveways more than three car lengths long, back-dragging may not be practical with a winch operated, gravity-lowered plow. It involves driving forward to the starting point (usually the garage door), dropping the blade, and pulling the snow back at least the length of your vehicle plus plow (about two car lengths). Repeat the process across the full width of the driveway. Turn around and back into the area just back-dragged clear and push the snow to where the snow will be piled.

Angle – A blade set at an angle is more effective for cutting and clearing hard-packed snow.

Traction – Ballast and snow chains, where allowed, are effective ways to increase traction. Plowing deep snow requires a steady movement of the vehicle.

DETACHING THE SNOWPLOW

1. Drive the vehicle to a clear area.
2. Lower the blade.
3. Lower the two castors and lock them in the lowered position with their pins.
4. Raise the blade
5. Attach the safety chain to hold the blade in the raised position
6. Disconnect the electrical connections
7. Remove the two locking plates from the tabs on the t-frame cross member.
8. Roll the plow to its storage place

NOTE: After disconnection of the snowplow, always apply dielectric grease to the electrical connectors and plugs, maintaining the protective coating on the terminals.

NOTE: Cover the electrical connectors with the caps supplied and cover the winch if stored outdoors.

9. To re-attach the snowplow to the vehicle, reverse the process above.

TROUBLESHOOTING

Difficulties with your Detail K2 plow? Please refer to the troubleshooting tips below. They are intended as a guide to assist in resolving some common technical problems and making helpful simple adjustments. For more assistance, please contact, toll-free, the Detail K2 customer service department at 1(888) 277.6960.

THE PLOW BLADE ROCKS OR TIPS FROM SIDE TO SIDE.

- It is normal for the whole assembly to rock back and forth when mounted on a vehicle, with the plow blade moving side to side from 20 to 25 cm (8 to 10 in.) This compensates for differences in terrain between what the plow rides on and what the vehicle is riding on. It should not be reduced with shims or washers.
- If the rocking is excessive, check the pivot bolt to ensure that there is no more than 6 mm (1/4") of play. You can tighten the lock nut, if need be.
- The springs and eye bolts may not have enough tension. If the springs look as though they are loose, loosen the inner nuts and re-tighten the Nylock nuts to the point where the springs are just tight. Then turn the Nylock nut, shortening the take-up by 6 mm (1/4 inch) so the springs open slightly. Snug up the inner M12 nut to hold the assembly tight.

THE WINCH STRAP IS BROKEN OR BREAKING.

- Broken straps are often the result of a lack of free movement in the U-bolt, at the point the strap is fastened to the A frame. Be sure that the lock nuts on the U-bolt allow it sufficient play.

THE WINCH DOES NOT START, OR IT HESITATES.

CAUTION! *Before working on the winch or the wiring in your vehicle, disconnect the battery and any other power sources.*



- Check that the battery cable is securely connected to the battery's negative terminal. Do not connect the black (negative ground) wire to the vehicle chassis or bodywork. It must lead directly to the negative battery terminal.
- Check that the control box switch (in the engine compartment) is "ON".
- Check that the winch contacts and the two 2" plug connectors are tight and free of corrosion or dirt. Dielectric grease works well to protect electrical connections.

PLOW OPERATION WORKS OPPOSITE TO THE DIRECTIONS ON THE CONTROLLER (i.e. blade lifts when ▼ button is pressed and vice versa)

- Check that the red lead is connected to the positive (upper) terminal on the winch, and the black lead connected to the negative (lower) winch terminal.

THE WIRING, CONTROL SWITCH OR CONTROL BOX ARE HOT.

- Be sure that a circuit breaker has been installed between the red battery cable and the battery's positive terminal. The breaker bracket must be connected between the battery and the brass terminal on the circuit breaker.

MAINTENANCE

REMINDER *The Detail K2 plow was designed for personal use ONLY and not rated for commercial use.*

Using it in commercial applications or travelling above the recommended speeds will result in us voiding your warranty. It can also cause serious damage to the plow, or to your vehicle as well as possible personal injury.

Detail K2 Inc. recommends the following general maintenance information:

- Continuous heavy operation may demand a more intensive service regimen. Snowplowing will subject any vehicle to very heavy demands. As a result, thorough inspection and bringing both the snow plow and the vehicle up to the best possible operating condition is extremely important.
- Before the beginning the plowing season, and after each use, inspect both the vehicle and snow plow.
- Lubricate all moving parts with synthetic grease. Check all electrical connections for corrosion or wear.

PRE-SEASON VEHICLE MAINTENANCE

- Have all scheduled vehicle maintenance performed as recommended by the manufacturer.
- In addition to generally keeping equipment in order, ensure specifically that:
 1. Windshield wipers, heaters, and lights are working correctly
 2. Emergency flasher lights are engaged to increase visibility and safety.
 3. Your vehicle is equipped with chains when necessary.
 4. The operator uses protective clothing and rubber gloves when handling caustic snow-melting chemicals.

WARRANTY

LIMITED ONE (1) YEAR WARRANTY

WHAT IS COVERED

DK2 Inc. warrants to the original purchaser of a Detail K2 Snow Plow that the product will be free and clear of manufacturing defects in workmanship and materials under normal use and service for a period of one (1) year from the date of the original purchase.

If within one (1) year from the original date of purchase this product fails due to defect in material or workmanship, Detail K2 will repair, replace, or supply any defective part at our option. Upon expiry of one (1) year, Detail K2 will have no further liability related to the snow plow.

Detail K2 does not authorize any party, including its authorized distributors or dealers, to offer any other warranty on behalf of Detail K2 Inc.

THIS WARRANTY DOES NOT COVER OR APPLY TO:

- a. Damage to the product due to misuse, mishandling and abuse
- b. Improper installation, maintenance and storage
- c. Expendable parts such as nuts and bolts, pins and springs
- d. Normal wear and tear
- e. Consequential damage and incidental damages such as damage to persons or property

This Detail K2 Snow Plow is intended for personal use only. It is not intended for commercial use and subsequent use in this capacity will void all warranty claims.

PROCEDURE FOR OBTAINING A RETURN AUTHORIZATION

Within the one (1) year warranty period, the purchaser of the snow plow must notify an authorized distributor or dealer of the claimed defect and provide proof of original purchase. At this time the validity of the claim will be determined and a Return Goods Authorization Number (RGA) will be issued if approved. No returned product will be accepted under warranty unless accompanied by an RGA# issued by Detail K2 Inc.

RESOLUTION FOR A DEFECTIVE SNOW PLOW

Detail K2 Inc. will at its option repair or replace the defective snow plow or snow plow parts covered by this warranty. The repaired snow plow or snow plow parts will be shipped to the purchaser upon completion. All transportation charges shall be the responsibility of the purchaser. Any damage in transit will be the responsibility of the carrier or at the risk of the purchaser.