





# **OPERATION and MAINTENANCE MANUAL**

Insist on genuine Meyer Parts & Accessories

# **Important Information**

Snow, despite the beauty it may impart to a bleak winter landscape, poses the dual threat of inconvenience and danger. The environmental conditions associated with snow, not to mention the health hazards and economic loss it may impose, seriously endanger thousands of lives annually. Business and industry suffer, and millions of snowbelt residents may be affected by a single snowstorm.

Meyer Products LLC has published this manual to help you get the maximum performance from your Meyer Snow Plow and familiarize you with the features designed for efficiency and safety; be sure you recognize and understand them. Follow recommended operation and maintenance instructions, so when a storm hits, your Meyer Snow Plow will be ready and you will know how to plow like a pro. DO NOT EQUIP ANY VEHICLE WITH A SNOW PLOW WITHOUT CONSULTING MANUFACTURERS' RECOMMENDATIONS.

Vehicles with Meyer Snow Plows installed may be so equipped as to meet vehicle manufacturers' specifications and recommended options for snow plowing use. **Most vehicle manufacturers insist that vehicles**  which are to be used for snow plowing be equipped with certain options and accessories, and it is so stated in vehicle manufacturer specifications for snow plow application.

We also recommended that, for optimum performance, vehicles used for snow plowing be equipped with:

- · Four Wheel Drive
- Minimum 60 Amp Alternator or Larger
- Minimum 70 Battery of Larger (550 C.C.A.)
- Mud and Snow Tires
- · Increased Radiator Cooling
- Automatic Transmission
- Power Brakes
- Power Steering

Under the continuing Meyer Products Improvement Plan, Meyer Products LLC reserves the right to change design details and construction without prior notice and without incurring any obligation.

IMPORTANT NOTICE: In conjunction with FMVSS (Federal Motor Vehicle Standard) and OEM (Original Equipment Manufacturer) guide lines, Meyer Products LLC has designed this plow package with the following guidelines:

CAUTION: Installation of a snowplow mat affect your ner vehicle warranty. For more information consult your Vehicle Owners' Manual / Vehicle Dealer.

WARNING: The vehicle must not be operated when overloaded. In all cases, the loaded vehicle weight, including the entire snowplow system, all aftermarket accessories, driver, passenger, options, nominal fluid levels, and cargo must not exeed the front/rear Gross Axle Weight Rating (GAWR), and total Gross Vehicle Weight Rating (GVWR). These weight ratings are specified on the safetay compliance certification label on the driver's side door opening. The use of rear ballast weight may be required to prevent exceeding the front GAWR.

WARNING: Check your local/state/provincial laws regarding vehicle restrictions when the snowplow is not attached. These restrictions during specified times of the year may require the removal of the mounting, lift frame, lift arm, hydraulic mechanism or any other fixtures or protruding surfaces mounted to the front of the vehicle.

Warning: Deployment of an air bag while using a Meyer snow plow will not be covered under Meyer Products' warranty.

# INSIST ON GENUINE MEYER PARTS & ACCESSORIES

- Protect your warranty
- Made to Meyer specifications
- Fit right
- Wear longer
- Perform better
- Your best value

# SAFETY FIRST

Meyer Products recommends that this manual be read cover to cover so that you are completely aware of all important safety recommendations. Record your V-68 Serial number. This number is printed on the decal under the hydraulic unit plastic cover.

For more information visit or contact:

www.meyerproducts.com e-mail info@meyerproducts.com

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# **Get to know your Meyer® Snowplow**





# 1. Aggressor Wings, Left and Right

Made from 12 gauge Steel, 4 lazer cut vertical ribs per wing.

# 2. Cutting Edge - Reversible

Replaceable high carbon steel provides extra long operating life; should be 1/2" above ground in plowing position. (Can be higher when used on gravel driveways.)

# 3. Runners (optional)

Adjustable and replaceable runners hold cutting edge at proper height.

# 4. Adjustable Super V Extension Springs

Tripedge give way when objects are struck at ground level. Note: Trip spring tension should be checked on a regular basis during the snowplow season. See Page 8 for more information.

# 5. Pivot Pin

Pin that attaches the wings to the A-frame.

# 6. A-Frame

Designed to attach the snow plow to the vehicle, to pivot moldboard for angle plowing, and to hold plow at proper distance in front of vehicle.

# 7. Power Angling Cylinders

Positions the wings hydraulically at all angles with 1-1/2 x 12" double acting cylinders.

## 8. Clevis Frame

Allows snow plow assembly to be attached or detached from vehicle in minutes.

### 9. Lift Frame

Allows for fast, complete removal of front end hardware, snow plow, lights and hydraulic unit in one complete module.

# 10. Attaching Pins

Pull 2 blue pins to remove complete assembly.

### 11. Lift Arm

Dual Chain locks in position to lift snow plow. \*

Warning: Lift Arm extends beyond bumper of vehicle. To minimize damage from a front end collision, Lift Arm should be removed from vehicle when snow plow is removed.

# 12. Meyer Nite Saber® Snow Plow Lights

Complies with the Federal Motor Vehicle Safety Standards.

# 13. Electric Hydraulic Power Unit (V-70)

Operates snow plow hydraulically- raises, lowers, angles, holds and floats moldboard in plowing position.

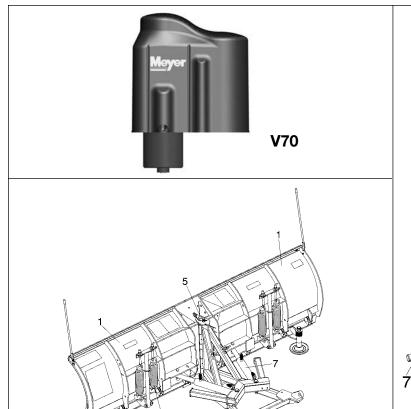
## 14. Sno-Flo® Powder Coat

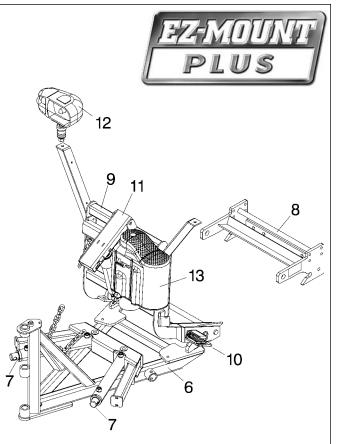
Baked on finish that looks like enamel, provides an extremely hard, low friction surface that outlasts ordinary paint by a large margin. Applied to all steel moldboards and mountings/frames.

### 15. Crankstand

Positions Moldboard and Lift Frame for easy attaching and detaching.

<sup>\*</sup> With Lift Arm all the way down, the chains should have a little slack.









SPECIFICATIONS	SV-8.5	SV-9.5	SV2-8.5	SV2-9.5	SV2-10.5		
WEIGHT (TOTAL)	915 lbs.	955 lbs.	983 lbs.	1015 lbs.	1067 lbs.		
HEIGHT	30.5"	30.5"	29" to 38-1/2"	29" to 39-1/2"	29" to 40-1/2"		
LENGTH	102"	114"	102"	114"	126"		
MOLDBOARD GAUGE	#12	#12	#12	#12	#12		
VERTICAL RIBS/WING	4	4	4	4	4		
TRIP SPRINGS	4	4	4	4	4		
CUTTING EDGES	1/2" X 6"	1/2" X 6"	1/2" x 6"	1/2" x 6"	1/2" x 6"		
PLOWING WIDTH							
AT FULL ANGLE	88"	98"	88"	98"	109"		
POWER ANGLING RAMS	1-1/2" x 12" Double Acting						

NOTE: Shown with optional snow deflector

# **Snowplow Controller Operation**

# HAND HELD CONTROLLER

The snow plow should only be in operation when the vehicle ignition switch and the control switch are in the iONî position. Care should be taken to insure that the control switch is kept dry and free from moisture during normal operation.

When the control switch is turned iOn,î lights illuminate the location of the individual touch pads for the functions of the snow plow: Up, Angle Left, Angle Right, Left Extend (V only), Left Retract (V only, Right Extend (V only), Right Retract (V only), Scoop (V only), Vee (V only) and Down. This switch has an auto detect feature which allows it to operate either the E-58H or V-68 unit.

Lowering of the snow plow an inch at a time is possible by tapping the down arrow in short intervals. Holding down the down arrow will activate a float light located in the upper right corner of the control switch. This light indicates the snow plow is now in the Lower/Float position. In this position the snow plow will be able to follow the contour of the road and the snow plow can also be angled to the left or right. Touching the up arrow automatically cancels the Lower/Float position.

While angling left or right or raising the snow plow if the button is pressed for more than six seconds the operation will be cancelled. This feature eliminates unnecessary amp draw from the vehicle charging system.

The auto lower button (ALM) when pressed will blink the back light in a (1) blink pattern and allows the plow to lower automatically when the vehicle is shifted into reverse and raise automatically when shifted out of reverse. To turn off the auto lower mode simply press the auto lower button twice again until the back light is not flashing.

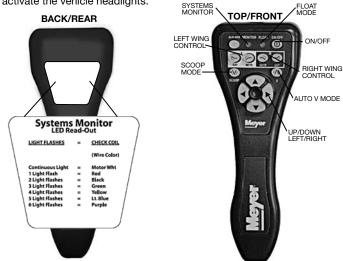
The auto raise button (ARM) when pressed twice will blink the back light in a (2) blink pattern and allows the plow to raise automatically when the vehicle is shifted into reverse and lower automatically when shifted out of reverse. To turn off the auto raise mode simply press the auto raise

button again until the back light is not flashing.

This switch is self diagnosing. The monitor light is located in the upper left corner next to the float light of the control switch. When the monitor light turns on and begins to flash the control switch is sensing a problem with a specific coil/connection on the hydraulic unit. The label below is on the back side of your control switch.

Reset is accomplished by turning off the ignition switch or by turning the power switch off momentarily and then back on. If the monitor light is still illuminated after attempts to reset the switch have failed, contact your nearest authorized Meyer Distributor for repairs.

When the controller is turned on it will activate the snow plow lights. When the controller is turned off or removed from the harness this will activate the vehicle headlights.



# **Removing and Attaching Plus Plow**

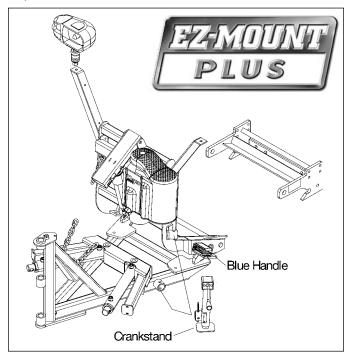
# DETACHING THE COMPLETE ASSEMBLY

Leave control switch in lower float position and push down on the Lift Arm. Disconnect the electrical plug. Attach Crankstand to the adjustment tube on the side of the A-Frame using the chained locking pin. **Caution: Crankstand must be secured at all times.** Adjust the Crankstand down until the bottom of stand touches the ground. Pull and twist the Blue Handle Pins to disengage lift frame from clevis frame. If the pins do not pull easily, adjust stand up or down slightly to remove tension on the pins until they disengage. At this time the lift frame should be leaning forward slightly, at rest on the top of the Crankstand. Pull truck away.

# ATTACHING THE COMPLETE ASSEMBLY

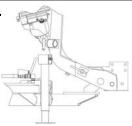
Check that Blue Handle Pins are disengaged. Drive the truck up to the EZ-Mount Plus assembly centering the hood of the truck to the lift arm to assure proper alignment with lift frame guide plates until contact is made. Once contact is made, drive forward, pushing the assembly a few inches. This insures the lift frame is square to the Clevis Frame for proper pin attachment. Adjust the Crankstand up until the front of the truck raises slightly. Twist Blue Handle Pins so that the small leg re-aligns with the slot, engaging the pins. The spring loaded pins should snap into place. **Note:** If pins do not lock immediately, move truck slightly forward and/or adjust the Crankstand up or down until pins engage, or push the top of the Lift Frame towards the truck locking the pins to the clevis frame. Remove the Crankstand from the A-frame by removing the chained locking

pin. Reattach the Crankstand to the transport tube on the driver's side of the Lift Frame in the vertical, retracted position. **Caution: Crankstand must be secured at all times.** Reattach the one step electrical connection.

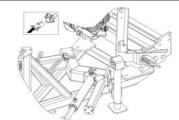


Crankstand Storage To store Crankstand on the Lift Frame slide the tube that is attached to the side of the Crankstand over the receiver tube on the driver's side of the Lift Frame. Insert the chain locking pin through the vertical holes on both the tubes. Note: Crankstand should always be fully retracted (up) and be pinned in the vertical transport position when not in use. Receiver Tube Cap may be placed over the driver side transport tube while the Crankstand is in use on the A-Frame. The Receiver Tube Cap may also be switched over to the Adjustment Tube of the A-Frame when the Crankstand is mounted to the Lift Frame. Storage of the Crankstand is the responsibility of the operator. The stand can be stored on the lift frame in the retracted position to the driver's side transport tube or inside the vehicle cab.

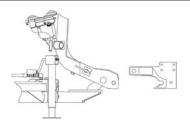




1 Lower Plow to float position and manually push lift arm down. Disconnect the electrical connection.

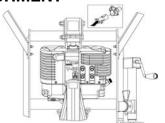


2 Remove crankstand from storage position on the side of mount and reattach to "A" frame. Crank until front of truck rises slightly.

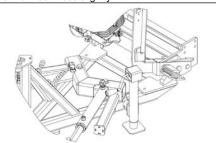


 ${f 3}$  Pull, then rotate blue pins on both sides of truck into locked out position. The vehicle is now free from mount and may safely back away.

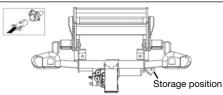




**1** Drive into assembly until contact is made and push assembly a few inches forward.



2 Rotate blue pins until engaged and push top of lift frame towards truck until pins click in place.



3 Return crankstand to storage position and reattach the electrical connection. The mount is now securely attached to the vehicle and is operational. Always confirm pins are fully engaged before over the road or snow plow operation.

# **General Maintenance**

Meyer Products LLC recommends this maintenance information for regular service. Sustained heavy operation may call for more frequent service. Snow plowing subjects a vehicle to exceptionally rugged use. As a result, it is very important to inspect and bring the snow plow and vehicle up to maximum operating conditions. Inspection should be made of both the vehicle and snowplow prior to the plowing season and after each use.

# **Pre-season Maintenance**

Scheduled vehicle maintenance should be performed as recommended by the manufacturer.

# Don't forget that in addition to keeping equipment in order:

- 1. Keep windshield wipers, heaters and lights working.
- 2. Use emergency flasher lights for increased visibility and safety.
- 3. Equip vehicles with chains where necessary.
- **4.** Provide operators with protective clothing and with rubber gloves for handling snow melting chemicals.

### VEHICLE ELECTRICAL SYSTEM

For maximum efficiency, the vehicle supporting the snow plow must be properly serviced. The system should consist of at least a 70 amp./hr. battery and a 60 amp alternator. Be sure to check regularly:

- 1. Battery terminals to assure they're clean and free of corrosion.
- 2. Electrical connections, to assure they're tight and corrosion free.
- 3. Battery must be in top operating condition.
- 4. Alternator and regulator, to assure maximum electrical output.

# **SNOWPLOW**

CAUTION: ALWAYS LOWER MOLDBOARD TO THE GROUND WHEN SNOW PLOW IS BEING SERVICED OR WHEN VEHICLE IS NOT IN USE.

Check the V-70 Diagnosis chart, pages 11-18, respectively and Post Season Maintenance, page 9, for advice on maintaining the unit.

- 1. Check and maintain hydraulic fluid reservoir level to Full. Oil level should be checked with lift ram down or retracted position.
- 2. Check entire hydraulic system for leaks. A significant drop in hydraulic fluid level is evidence of a leak which must be corrected to prevent serious damage.
- 3. Before and after each season, remove moldboard center pivot pin, thoroughly grease pivot pin and reinstall. Lubricate all pivot points with chassis lube.
- **4. ADJUSTING TRIP SPRING TENSION** Tighten top locknut 4 turns beyond the point when spring coils begin to separate. Tighten bottom locknut to hold eye bolt in position as shown in figure 1.



Figure 1

# 5. RUNNERS (optional)

- A. Inspect moldboard runners for wear and height adjustment.
- B. Always replace runners as soon as they start to wear through.
- C. Adjust the runners to maintain cutting edge height of 1/2" above ground in snow plowing position. (Can be set higher when used on gravel driveways).

# 6. CUTTING EDGE - REVERSIBLE

Replace the cutting edge as soon as it appears worn. This will prevent permanent damage to the tripedge.

# 7. MOUNTING BOLTS

Retighten all mounting bolts after first snow plowing session and at regular intervals through the season.

**8. SNO-FLO® POWDER COATING**, both black and yellow, should be checked at the beginning and end of each season for any signs of rust. If any exists, use Meyer special Sno-Flo® powder coat touch-up available in spray cans.

NOTE: PROTECTION AGAINST RUST AND CORROSION When the power unit is not used for extended periods, protect the chromed lift rod by fully extending and coating it with chassis lubricant. Coat the exposed portions of the power angling cylinder rods with chassis lubricant to protect against corrosion.

# **Post Season Summer Maintenance**

# 1. Draining & Replacing Meyer M-1 Hydraulic Fluid

Drain the fluid by removing the drain plug located on the bottom of unit. To drain the fluid from the power angling cylinders, disconnect the fittings and completely retract the cylinder rods and purge cylinders and hoses of all hydraulic fluid. The complete system should then be flushed out with Meyer M-2 Flushing Fluid before adding new Meyer Hydraulic Fluid.

- 2. Meyer M-1 Hydraulic Fluid is specially formulated with an anti-ice additive for almost constant viscosity in subzero temperatures. Because it is free-flowing in extreme cold, the unit's performance and efficiency are not affected by winter weather. It is effective for a maximum of one year. Always carry an extra quart of Meyer M-1 Hydraulic Fluid. Use of any inferior fluids will void the Meyer warranty.
- 3. Refill power unit with **Meyer M-1 Hydraulic Fluid** by fully retracting lift piston and mounting cylinder and filling reservoir to top. **Note: Do not over fill unit**, over filling unit will cause oil to squirt out of the reservoir pressure relief valve. Power angling rams should be collapsed. Install Hydraulic unit and Moldboard assembly on vehicle. Remove reservoir pressurerelief valve (Filler plug). To bleed air from the system power angle wings side to side while maintaining a constant check on the reservoir fluid level.

**Note:** It may be necessary to bleed air from the Power angling cylinders by loosening the hydraulic fittings. Extend and retract wings until you have a steady stream of oil coming out of fitting. Raise and lower the plow several times. With lift ram fully retracted (down) check fluid level and replace filler plug.

### **SNOW PLOW STORAGE**

- 1. When snow plow is disconnected, disconnect lift chains from lift arm and extend lift cylinder to end of stroke and coat chrome rod with light grease. This fills the cylinder with hydraulic fluid and protects the interior and exterior from rust and corrosion.
- **2.** Whenever Moldboard is disconnected, coat the exposed portions of the power angling cylinder chrome rods with light grease to protect them from corrosion.
- **3.** Coat pivot pin and other wear points with chassis lubricant. Be sure to grease all grease holes.

**4.** Unplug electrical connection at power unit. Coat connection with a dielectric compound to prevent corrosion and plug into their corresponding weather plug.

**5.** Reference post season summer maintenance on page 9 prior to final storage.





# DIAGNOSTIC TROUBLE SHOOTING



These charts are intended to be used as an aid in diagnosing problems on the V-70 Meyer Hydraulic Power Units. They are not a substitute for factory training and experience. Be certain to read the General Information and Testing Tips sections before attempting any troubleshooting.

# **TESTING TIPS**

Many tests do not require removing the Power Unit from the vehicle. However, more thorough testing can be done by using the Meyer Test Stand which allows direct pressure and Amperage readings.

- 1. Use a screwdriver or other small tool to check for magnetism of solenoid coils ("S1," "S2," "S3," "S5," "S6" & "S7"). Place the tool on the coil and have an assistant operate the switch. You should feel strong magnetic attraction.
- 2. Use a test light or volt meter to determine whether there is power at harness or Super-V controller.
- 3. When determining Amp draw of motor, always obtain the highest value possible, i.e., at maximum raise or angle with motor running.
- 4. The pump shaft of a good pump can be turned smoothly using two fingers. If it can't be turned easily, the pump must be replaced.
- 6. Pump pressure can be measured at an angle hose (note pressure at full angle).
- 7.If hydraulic system is contaminated it is recommended that the hydraulic unit, power angling rams and hoses be drained and flushed with M-2 flush fluid. The system should then be refilled with Meyer M-1 oil. See page 9.

V-68	RAISE	LOWER	RIGHT RETRACT	RIGHT EXTEND	LEFT RETRACT	LEFT EXTEND	ANGLE RIGHT	ANGLE LEFT	VEE	SCOOP
MOTOR	Х		х	Х	Х	х	х	х	Х	х
S1	х	х								
S2	х	х							Х	х
S3		х	х	x			х		х	х
S5						х				х
S6				х						х
S7			х		х				Х	х

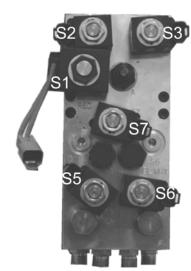
V-70 Operation Chart



V-68	RAISE	LOWER	RIGHT RETRACT	RIGHT EXTEND	LEFT RETRACT	LEFT EXTEND	ANGLE RIGHT	ANGLE LEFT	VEE	SCOOP
MOTOR	х		х	х	х	х	х	х	Х	х
S1	Х	Х								
S2	х	х							Х	х
S3		х	х	х			х		Х	х
S5						х				х
S6				х						х
S7			х		х				Х	х

# S1 Solenoid Failure Red and Black w/White Stripe

No Raise or Lower

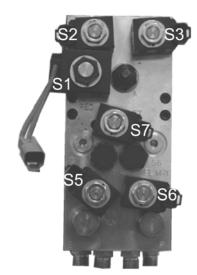


V-68	RAISE	LOWER	RIGHT RETRACT	RIGHT EXTEND	LEFT RETRACT	LEFT EXTEND	ANGLE RIGHT	ANGLE LEFT	VEE	SCOOP
MOTOR	x		Х	Х	Х	Х	х	х	Х	х
S1	x	х								
S2	х	Х							Х	х
S3		х	х	Х			х		Х	х
S5						х				х
S6				х						х
S7			х		х				х	х

# S2 Solenoid Failure Black and Black w/White Stripe

No Raise, Lower, Vee or Scoop

Press Vee Function the plow will retract right wing



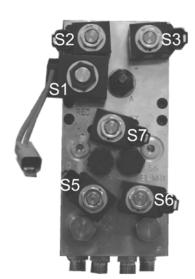
V-68	RAISE	LOWER	RIGHT RETRACT	RIGHT EXTEND	LEFT RETRACT	LEFT EXTEND	ANGLE RIGHT	ANGLE LEFT	VEE	SCOOP
MOTOR	Х		х	х	Х	х	х	х	х	х
S1	х	х								
S2	х	х							Х	х
S3		х	Х	Х			Х		Х	Х
S5						х				х
S6				х						х
S7			х		х				х	х

# S3 Solenoid Failure Green and Black w/White Stripe

No Lower, Right Retract , Right Extend, Right Angle, Vee or Scoop

Press Right Retract the plow will retract left wing

Press Angle Right the plow will angle left

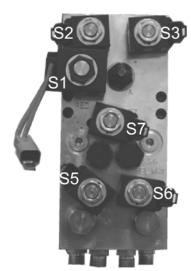


V-68	RAISE	LOWER	RIGHT RETRACT	RIGHT EXTEND	LEFT RETRACT	LEFT EXTEND	ANGLE RIGHT	ANGLE LEFT	VEE	SCOOP
MOTOR	Х		х	х	Х	х	х	х	Х	х
S1	х	х								
S2	х	х							Х	х
S3		х	Х	x			х		Х	х
S5						Х				Х
S6				х						х
S7			х		х				х	х

# S5 Solenoid Failure Yellow and Black w/White Stripe

No Left Extend or Scoop

Press Left Extend the plow will angle Left

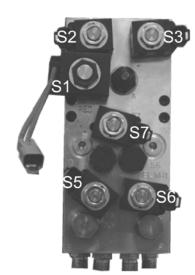


V-68	RAISE	LOWER	RIGHT RETRACT	RIGHT EXTEND	LEFT RETRACT	LEFT EXTEND	ANGLE RIGHT	ANGLE LEFT	VEE	SCOOP
MOTOR	Х		х	х	х	х	х	х	х	х
S1	х	х								
S2	х	х							Х	х
S3		х	х	x			х		х	х
S5						х				х
S6				Х						х
S7			х		х				х	х

S6 Solenoid Failure Blue w/White Stripe and Black w/White Stripe

No Right Extend or Scoop

Press Right Extend the plow will angle Right



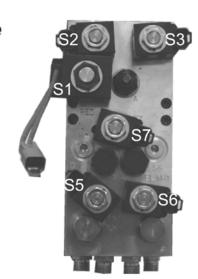
V-68	RAISE	LOWER	RIGHT RETRACT	RIGHT EXTEND	LEFT RETRACT	LEFT EXTEND	ANGLE RIGHT	ANGLE LEFT	VEE	SCOOP
MOTOR	х		х	Х	Х	х	х	х	Х	х
S1	x	х								
S2	x	х							Х	х
S3		х	х	х			х		х	х
S5						х				х
S6				х						х
S7			Х		Х				Х	х

# S7 Solenoid Failure Purple and Black w/White Stripe

No Right Retract, Left Retract, Vee or Scoop

Press Right Retract the plow will angle right

Press Left Retract the plow will angle left



# **Efficient Snow Clearance Starts with Planning**

### PREPARING AREAS. USE OF GUIDE MARKERS

Every area to be plowed should be inspected before snowfall for potential hazards. Holes should be repaired, raised manhole covers leveled or noted and obstructions noted to prevent damage to the plow mounting or vehicle undercarriage.

Markers or stakes with reflectors should be in position to indicate boundaries of areas to be plowed, location of shut-off valves, catch basins and other hazards. Markers should be at least three feet above the ground; higher in areas of deeper snowfall.

The first step in organizing an efficient plan is to prepare a map or procure a blueprint of the area. Locate and mark all utilities, outlets, shutoffs, catch basins and possible emergency equipment that must be reached from outside.

Figure the square footage of each area and the total area. Especially note areas from which snow will have to be carried, called "trapped" areas. Although hauling is expensive, it is necessary where piled snow would limit access. Indicate clearing priorities on your map. This may aid you in preparing a priority plan for your clearance operation.

## KEEP SNOW UNDER CONTROL

Deep or heavy, wet snow, because of its increased weight, calls for more skillful and powerful plowing than light powder snow. Here is where your Meyer Super-V gives you a big advantage over a straight blade. Set the Super-V to the " $\Lambda$ " position and proceed to open a single path that will allow you to work the remainder of the area. Always plow in LOW gear and keep plowing. Remember that wet snow weighs about 12 pounds per cubic foot. As it piles up in front of a snowplow blade, the weight can quickly increase to several tons.

Where packed snow or ice must be plowed, it is sometimes necessary to lower the cutting blade to rest directly on the road surface. In that situation, plow in lowest gear for greatest power to the cutting edge. This method also prevents the plow from "climbing over" the icy surface.

If plowing very deep snow, 12 inches or more, you may have to plow with the blade partially raised to shear off successive layers of snow until a working area is clear. Then work small "bites" into the edge. The "bite" depth should be inversely proportional to the snow depth. A rule of thumb: 6-inch snow may be plowed with the entire blade width; 9-inch snow with 3/4 of the blade width; and 12-inch snow with only 1/2 of the width. Experience will show what work can be done without stalling or getting stuck.

# **Selecting Equipment**

Where you plan to plow, and the conditions under which you will be plowing, determine to a great extent the type of vehicle you'll find most useful. In general, three types of vehicles are available as the power source of snow clearance. Each type has certain inherent advantages depending upon the particular situation.

Four-wheel drive HEAVY DUTY TRUCKS have proven most effective in heavy duty snow plowing situations using the Super-V. They have excellent traction and the Super-V handles with ease.

Two-wheel drive TRUCKS, particularly those of 1 to 3 tons, are best for straight line road clearance and in large open areas.

Meyer Snowplow's custom design for specific vehicles provides the advantage of easy, fast attaching and detaching. This feature permits utilization of vehicle versatility as weather conditions and job requirements demand.

20 m.p.h. is a maximum snow plowing speed under ideal conditions, assuming the driver is familiar with the roadway or area to be cleared. Under unfamiliar or hazardous conditions, or if there is poor visibility, we recommend reduced speed and extreme caution.

Careful analysis of the area you intend to clear of snow will direct you to the types of equipment you'll require. Check Table 1, Average Hourly Snow Clearing Capacities, for recommended equipment depending upon the area in which you'll be working.

Then, match the vehicles you already have with the snow removal equipment you need. If your vehicles do not have the capacity to clear all major access areas within two hours, you should increase clearing capacity with additional equipment or arrange for assistance through a contract plowing service.

# AVERAGE HOURLY SNOW CLEARING CAPACITIES\* TABLE 1 (Based on Straight Blades)

	Snow Plow size	Open Area (sq. ft.)	Trapped Area (sq. ft.)	Straight Line (no. of miles of roadway Cleared in 2 passes)
4 Wheel Drive	7 foot	33,000	25,000	2 1/2 miles
Utility Vehicles	6 1/2 foot	53,000	21,500	5
Trucks 1 1/2 - 1 Ton (2 WD)	7 - 7 -1/2 foot	38,000	19,000	4
(4 WD)	7-8 foot	88.000	42,500	6
1 1/2 - 2 Ton	8 1/2 - 9 foot	67,500	30.000	7 1/2 **
2 1/2 - 3 Ton	10 foot	67.500	~	10 **

<sup>\*</sup> Based upon regional interviews with knowledgeable contractors (6' snowfall cleared by operators with average ability)

<sup>\*\*</sup> Based upon recommended maximum plowing speed of 20 mph.

Not recommended for use except in very large areas of this type.
 Use the 1 1/2 ton figures if necessary

# **Plow with the Storm**

# Plow with the Storm

It is of utmost importance to remember one basic rule — Always plow with the storm. Start plowing when snow is 1 to 4 inches deep, depending upon traffic or other limitations. Heavy wet snow can be very hazardous when just 1 inch is on the ground. Accumulations of more than 4 inches can be very difficult to clear.



# Angle Moldboard for Optimum Results.

The Meyer Super-V will provide a significant advantage when plowing deeper snow in a straight path. Once you have made the first path using the Super-V in the pointed or arrowhead position, you can proceed to finish using straight blade procedures. Set the moldboard at the best angle for rolling snow sideways in the desired direction. The snow plow path, in the angled position, should exceed the tire track by at least six inches on either side. Be sure to have enough slack in the lift chain while plowing so the cutting edge of the moldboard can follow the ground contour. Use the adjustable runner shoes to set the bottom edge of the plow just above the ground for best operation.

Snow is heaviest when wet, and most difficult to handle. The National Weather Service reports that a 6-inch, average weight snowfall on a 200 x 200 foot parking lot weighs 62 tons. Heavy, wet snow for the same area might weigh as much as 248 tons. If the heavy snow had to be hauled away, you'd need 74 full loads on a 10-yard truck.

Obviously, the only way to assure clear traffic areas is to be prepared with the proper equipment and expertise to open arteries and areas to traffic. Remember to keep current with accurate snowfall information from local weather bureaus via radio and television.

# **Two Established Snow Clearance Plans**

These two snow plowing techniques have been time- and operation-tested. Use them as guidelines for most snow plowing strategies. Plan I is for smaller areas of 50,000 sq.ft. or less. Plan II is for larger establishments having more than 50,000 sq.ft. to be cleared.

# PLAN I (less than 50,000 sq. ft.)

Recommended equipment: A four wheel drive vehicle; a SV8.5 or SV9.5 snow plow; snow shovels; and ice control equipment.

Recommended procedure: PLOW WITH THE STORM.

Begin plowing at the suggested accumulation for your type of establishment (i.e., 1" for commercial and institutional areas; 2" for industrial establishments; 3" for municipal and residential areas.) Continue until snow has been cleared. Don't forget - snowfall often surpasses weather forecasts. A well planned clearing schedule will help prevent the necessity for expensive emergency action.

# A typical small-area strategy:

- Keep in touch with local weather forecasts for preparatory measures.
- 2. Notify scheduled personnel.

- 3. Have vehicles and equipment inspected, fueled and ready.
- 4. Clear area by pushing snow first to sides of drives, around perimeters of parking areas and away from loading docks and platforms. It is often true that the smaller the establishment, the greater the proportion of "trapped" areaswhich will require snow to be hauled away. Always deposit snow as far back as possible for greatest use of dumping areas.
- Use snow shovels to clear walks, gates and doorways.6.Treat with snow-melting materials as needed.

# PLAN II (over 50,000 sq.ft.)

Recommended equipment: The suggested number of vehicles, according to the Table "Average Hourly Snow Clearing Capacities", on page 20, with SV8.5 or SV9.5 snow plows; front end loaders if needed; snow shovels and ice control equipment.

Recommended procedure: As always, **PLOW WITH THE STORM**. Begin plowing at the suggested accumulation for the area and continue as required. Actual snowfall frequently exceeds forecasted conditions. Well-planned snow clearance strategy reduces the chances for expensive emergency action. Snow Plowing Tips from the Pros

# **Snow Plowing Tips from the Pros**

### **SNOW PLOWING OPEN AREAS**

Open areas such as parking lots require a more serious approach to planning, where to begin, and where snow can be stacked at the edges. The following will help in making a plan, thus turning out a neat, professional job.

Always turn on warning flashers and/or use yellow warning beacon or strobe light when plowing. Then make a single pass down the center on the longest dimension. Angle plow the snow toward the long sides with continuous passes until the area is cleared and snow is all stacked around the outside edges.

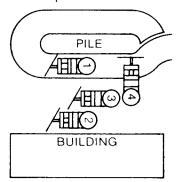
For larger areas, efficient plowing calls for clearing area immediately in front of buildings and working away from buildings toward the outer limits of the area. When snow is quite deep, it might be necessary to push the excess into piles out of main traffic lanes for later handling. Areas 100,000 sq.ft. or more — once the main artery is clear, it is usually most efficient to plow at right angles to the artery, piling up windrows by back and forth passes in alternate lanes. The windrows can later be pushed out of the way or left as is depending upon conditions.

To clean up remaining snow, you can put the blade in the straight position. Buck piles from either side to stack snow. The blade will automatically "ride" up the pile to make stacking easier.

On a dirt or slag surface, drop moldboard to ground in straight position, then raise one inch or adjust runners for desired clearance. Under extreme surface conditions it may be necessary to plow with moldboard in suspended position.

### PARKING LOTS

- 1. Always turn on warning flashers when plowing.
- Make first pass to clear area into which you will later push more snow.
- Clear front in straight position and clean up remaining snow. Buck piles from either side to stack snow. Blade will automatically "ride" up pile to aid in stacking.
- 4. Set the Super-V in the "V" or scooped position to clear between parked cars or areas where it is necessary to make short passes without snow spill over.



# STRAIGHT LINE SNOW PLOWING

This method is most efficient for streets and roads. V type snowplows mounted on heavy utility vehicles or service trucks are excellent for such an operation.

Set the snow plow moldboard at an angle so that the snow is rolled to the shoulder or curb.

Single lane roads and aisles can often be cleared with one pass.

When the road is more than twice the moldboard's width, plow a center lane for the first full pass. Then, in follow-up passes, work the snow to the sides. The diagram illustrates plowing sequence for a typical 20-foot road.

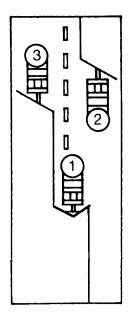
Corner clearing is almost automatic when clearing intersecting streets. When snow is heavy, a little "stop over" snow may have to be removed from intersections by additional short passes.

We recommend a speed of 5 to 15 MPH for this kind of plowing. Of course, road surface, weather conditions and equipment will influence your speed.

Plow with the storm.

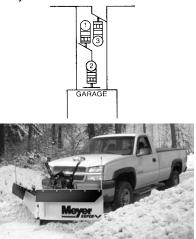
## **WIDE DRIVEWAY**

- **1.** Make one pass down center with blade in "Λ" position.
- Push snow to side with moldboard in straight position & angled right or left.
- 3. Do the same on either side.



# **DRIVEWAYS**

- 1. Plow toward garage pushing snow to one side.
- Set blade to straight position, lift it as high as possible and drive through snow to garage. Drop blade and back drag to street.
- **3.** Back into driveway and angle blade again. Use as many passes as necessary to clear drive.



# **CLEARING TRAPPED AREAS**

Areas where there is little or no space for stacking cleared snow are considered "trapped." An example is an area requiring full access from surrounding buildings. Snow plowing techniques are the same as for any other space of comparable size, but heavy accumulations must be piled for removal by truck.

# **CLEARING RESIDENTIAL AREAS**

Driveways and aprons are most efficiently cleared by maneuverable four wheel drive vehicles. Recommended procedure is to enter the driveway rolling snow away from the residence. Stop about two-thirds of the way in, set the blade in bucking position, lift as high as possible, then drive through the snow to the garage. Drop the blade and back drag to the street. Turn around, back into the cleared path to the garage, reset the blade angle and continue rolling snow away from the house. Complete as many passes as necessary to clear the snow.

# **STACKING**

When snow clearance conditions are perfect, snow can be merely pushed out of the way to unused areas. The first storm of the season, plow back from the drive area to allow space to pile future snowfall. It is usually necessary to pile snow up to considerable heights. In that case, **push the snow forward and upward by raising the snow plow as you move into the pile.** The vehicle's momentum will carry the plow into the pile, avoiding equipment damage. The pile should slope outward, so later snows can be pushed upward. **WARNING:** Stacking snow or pushing up into high snow piles with the plow in Lower/Float or Angled position can cause damage to the Snow Plow components or the vehicle that will not be covered under the Meyer Products Warranty Program. Such damage may include, without limitation, twisting the A-Frame, the Moldboard hitting the Lift Arm, or the Plow Markers striking the vehicle.

# **Chemicals for Snow and Ice**

Except in very light snow, ice melting materials should never be used in place of snow plowing. However, in combination with trained personnel and equipment, ice melting materials play an important part in controlling ice and snow. Whenever possible, apply ice melting materials before a snowfall. You'll use less, and it will be more effective in preventing snow and ice from adhearing to the pavement surface and less damaging for the environment. You may have to increase the use of ice melting materials at night and as temperatures fall.

Experts agree a mixture of two parts mixed ice melting materials (1:3 calcium chloride to salt, by weight) mixed with one part abrasive (cinder, sand or slag) is more effective than rock salt alone in melting snow and ice below 30°F. One hundred fifty pounds of such mixture with abrasives will treat a 50,000 sq.ft. surface.

It is imperative to treat priority areas such as hills, heavy traffic areas, bridges and intersections first, especially where snow may compact and adhere to the road surface, causing icy road conditions. When slush begins to stiffen and refreeze, it will be necessary to plow again and reapply chemicals.

# **Meyer Spreaders**



# Hotshot ™(38100) &Hotshot HD™ (38110)

The Meyer Hotshot spreaders promise to last season after season. These Spreaders are available in steel and stainless steel (HD). Both use a polypropylene hopper with a capacity to hold 1.3 c.f. / 70lbs of salt, sand seed or any other free flowing material. Other features include; infinitely adjustable feed gate (up to 12 foot wide pattern), pneumatic tires and weather resistant fitted hopper covers which will keep the spreader material dry and contained in the hopper.



# Mini Jr. (36006)

The Meyer Mini Jr (5.75cu.ft.) is an ideal solution for small and medium sized jobs: walkways, intersections, access ramps and parking lots. The no rust thermoplastic hopper and internal vertical spiral auger provide continuos and even flow of material.

Adjustable controls allow spreading of #1 rock salt from 3 to 30 feet. Easy to attach and detach. The Mini Jr. mounts to a standard 2" trailer receiver hitch.



# Blaster Spreader 350/350S 750/750S



The BlasterTM Spreader is a poly tailgate spreader, available in four models that spread salt or salt & sand. What makes this spreader unique is its 1/2 horsepower direct drive motor, it's the most powerful spreader motor available. The motor's "Fast Blast" feature can produce up to 70 amps of surge power to grind through chunks of salt or sand. The 750- and 350-pound hoppers are made of extended life polyethylene and are backed by Meyer's exclusive 3 + 5 year ROC Solid Warranty. Variable speed control allows for precise material spread pattern up to 40 feet.

# **Under Tailgate Spreader**

An extremely rugged truck accessory, the Under-Tailgate Spreader is offered in two models: a single auger or for ultimate efficiency dual augers; each spreads cinders, sand, salt or pea gravel. Attaches easily under the tailgate of any standard dump truck, yet will not obstruct dumping over the spreader. The spinner is always in spreading position and can be operated with the truck moving backward or forward. Also available in stainless steel and direct drive.



# **MDV** Spreader

- 9' Carbon Steel (63001)
- 9' Stainless Steel (63004)
- 10' Carbon Steel (63002)
- 10' Stainless Steel (63005)

The MDV spreader expands your choice between pickup size spreaders and the large V-box units. The MDV bridges the gap between the 15,000 GVW and the 20,000 GVW trucks. It can be powered by either your truck's central hydraulic system or its own power source.



# Mate XL (38000)

The Mever Mate XL spreader holds 9 cubic feet of salt, sand or calcium chloride and it can even spread seed to extend its use beyond the snow season. The Mate XI features a thermoplastic no-steel frame for long-lasting protection from corrosion. The Mate XL is powered from a 1/6thH.P. 12VDC motor with in-cab variable speed control which will spread material up to 30'. A vibrator is standard on the XL model. The Mate XL requires NO drilling and is quickly attached and detached from any full size pick-up truck. Adjustable controls allow spreading of bagged#1 rock salt from 3 to 30 feet.





# Replaceable Tailgate Spreader

This replaceable tailgate spreadermounts easily on most one-tondump bodies by simply replacing theexisting tailgate. Designed to spreadfree-flowing chemicals, salt and/orsand throughout its entire width, thereplaceable tailgate spreader canspread in widths from 4' to 40'. Ahost of optional equipment allowsyou to customize the spreader to fitmost any job requirement.

Visit www.meyerproducts.com for more information

# Insert Hopper Spreaders 1.8 cu. yd. Carbon Steel (62991),1.8 cu. yd. Stainless Steel (63006),2.0 cu. yd. Carbon Steel (62992),2.0 cu. yd. Stainles Steel (63007)

The Meyer 1.8 & 2.0 cubic yard capacityV-box spreader for pickup trucks mountsand stores as a single unit. This mechanically-operated spreader is powered by an electric start 10 H.P. gas engine, which drives a high torque orbital-type motor and a 20:1 ratio gearbox. Spinner and drag chain speeds work in unison with engine R.P.M. The spinner will evenly spread material from four (4) to thirty (30) feet. In-cab controls make operation easy.



# PolvHawk

This one-piece polyethylene hopper fits most 3/4 ton pickup truck beds and provides all the robust performance qualities of conventional V-box spreaders, but with less weight, greater capacity, longer life and less maintenance. The PolyHawk holds 37% more material than competitive poly spreaders. Another key feature of the PolyHawk™ is the swing-up spinner assembly. The swing up spinner allows for simplified clean-up and easy seasonal storage. The Poly Hawk is equipped with a top screen and a 16" wide stainless steel conveyor that provides reliable material handling control and has a replaceable stainless steel conveyor floor. Overlapping baffles, 2 internal and 4 external, and a 13" poly spinner disc provide precise material spreading. A 10 HP 4-cycle engine is standard and an 11 HP 4-cycle is available as an option.

# Ice Hawk

This innovative configuration comes complete with its own, built-in hydraulics system! This self-contained v-box spreader unit can be initially installed in 2-3 hours and re-installs in only 30 minutes, literally providing plug-n-go installation. Plus, the Ice Hawk eliminates both the need to install costly hydraulic systems in each truck and the common shortcomings of engine driven vboxspreaders, while providing unsurpassed spreader performance. Thus allowing you to spend more time on the road - and less time in the maintenance garage.



# **STCC**

The Tailgate Cross Conveyor (TCC) provides for the most efficient method of distributing granular materials available today. This sturdy cross conveyor will perform dozens of jobs while saving on labor, time and materials. Every municipality, contractor, utility and construction company can benefit from the TCC cost efficient material handler. The cross conveyor transfers material left or right allowing for multiple uses. The TCC mounts directly to dump box with quick disconnect pins. Unit mounting allows for dumping over or parallel-to-ground positioning. Conveys most free flowing material.

# **Meyer Accessories**

# M-1 Hydraulic Fluid

Keep your Meyer Electro-Touch® snow plow control system operating at peak performance; change hydraulic fluid yearly. Meyer M-1 Hydraulic Fluid has additives that insure peak efficient operation of all Meyer electric hydraulic power units (15134).



# Hvdra-Flush®

Hydra-Flush™ advanced technology maintains your lift's maximum performance by removing contaminants and performance robbing deposits. Hydra-Flush™ protects and preserves the life of your pump, seals, o-rings, and hoses. It is ideal for off-season storage (15901).



# Sno•flo®Powder CoatTouch-Up Paint

Super-smooth high gloss paint especially formulated for use on powder coat finishes. Available in 12 oz. aerosol cans. Black (07026) Yellow (07027) & 1 qt. brush-on (07181).



# **Snow Deflector**

Available in specific sizes to fit all Meyer moldboards. Kits come with attaching parts. Deflects snow flume down and away from windshield area. 8-1/2' (12579) 9-1/2' (12643).



# Winch Kits

E-ZMount Plus (16529)



# Lock Pin

Protect your Meyer Snow Plow components with this sturdy, durable stainless steel and brass lock pin. Available for the Quik-Lift or Electro-Touch power units. Quik-lift - 2" long (07694C) Electro-lift - 3" long (07695C)



Visit www.meyerproducts.com for more information

# **FAST MOVING PARTS LIST**

### **CUTTING EDGES-URETHANE**

09302 SV 8.5 & SV2 8.5 09303 SV 9.5 & SV2 9.5 09237 SV2 10.5

# **CUTTING EDGES - (STEEL)**

09218 (2) SV 8.5 & SV2 8.5 09219 (2) SV 9.5 & SV2 9.5

09304 SV2 10.5

# **CUTTING EDGE NUTS & BOLTS (STEEL)**

21943 (10) BOLT 20307 (10) LOCKNUT

## **SNOWPLOW HARDWARE**

09124 EYE BOLT & NUTS 07215 TRIP SPRING 08852 MARKER KIT 12557 PIVOT PIN

### **RUNNERS & SPINDLES**

09214 (OPTIONAL) RUNNER KIT COMPLETE
12394 MUSHROOM SHOE CASTING ASSY

12449 RUNNER SPACER 20363 WASHER

22083 LINCHPIN

## A-FRAMES

13755 SUPER-V A-FRAME

# LIFT CYLINDER

05815 1-3/4" X 8" SAE 6

### POWER ANGLING CYLINDERS

07186 1-1/2" X 12" SAE-6 ANGLE RAM DOUBLE ACTING

### ANGLING CYLINDER SEAL KITS

07171 SEAL KIT 1-1/2" X 12" SAE-6 ANGLE RAM DOUBLE ACTING

### **HOSE & HOSE FITTINGS**

22675 HOSE 1/4 X 9 -1/4" SAE-6 22420 HOSE 1/4 X 33" SAE-6 22418 HOSE 3/8 X 33" SAE-6 22676 FITTING SAE-6 90° ELBOW 22460 FITTING SAE-6 90° ELBOW

# **COUPLER'S HOSE END (optional)**

22443 FEMALE COUPLER SAE-6 22444 MALE COUPLER SAE-6

# **COUPLER'S ANGLE CYLINDER (optional)**

22442 MALE COUPLER SAE-6 22445 FEMALE COUPLER SAE-6

# SNOW DEFLECTOR KITS (RUBBER) (optional)

FOR <u>STEEL</u> MOLDBOARDS

12579 SV-8.5 KIT 12535 SV-8.5 DRIVER SIDE

12644 SV-8.5 PASSENGER SIDE

12643 SV-9.5 KIT

12641 SV-9.5 DRIVER SIDE

12646 SV-9.5 PASSENGER SIDE

## **ELECTRIC/HYDRAULIC POWER**

15082 V-70 SEAL KIT

# MISC. POWER UNIT

15096 MOTOR TWO TERMINAL V-70

### V-70 POWER UNIT PARTS

15112 S1 VALVE

15111 S2, S3 & S7 VALVE 15117 S5 & S6 VALVE

15079 S1 COIL

15118 S2, S3, S5, S6 & S7 COIL

# CONTROLLER

22695X SUPER-V CONTROLLER 22790X JOYSTICK CONTROLLER

# **HARNESS**

22696 PLOWSIDE 22691 TRUCKSIDE

# LIGHTS

07224 NITE SABER I PLOW LIGHT-PASSENGER
07225 NITE SABER I PLOW LIGHT-DRIVER
07552 NITE SABER II PLOW LIGHT-PASSENGER
07551 NITE SABER II PLOW LIGHT-DRIVER

NOTE: ELECTRICAL REPLACEMENT PARTS LISTED ABOVE ARE FOR 12 VOLT SYSTEMS ONLY.

### PAINT - TOUCH UP

BLACK AEROSOL (1) 07026 **BLACK AEROSOL (12)** 08676 07027 SNO-FLO AEROSOL (1) YE 08677 SNO-FLO AEROSOL (12) YE 07028 SNO-FLO BRUSH-ON .6 OZ. (1) YE 08678 SNO-FLO BRUSH-ON .6 OZ.(12) YE SNO-FLO - QT. (1) YE 07066 08686 SNO-FLO - QT. (12) YE

## HYDRAULIC FLUID

15134 M-1 FLUID QUART 15487 M-1 FLUID 12 QT. CASE 15902 M-2 FLUSH FLUID

Visit www.meyerproducts.com for more information

# MEYER@/DIAMOND® SNOW PLOWS LIMITED WARRANTY

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damages, so the above limitation or exclusion may not apply to you including, without limitation, any liability for third-party claims against you for damages, for products not being available for use, or for lost profits. Meyer Products LLC's liability will be no more than the amount you paid for the product that is the subject of a claim; this is the maximum amount for which The original purchaser's sole and exclusive remedy against Meyer Products LLC, and Meyer Products LLC's sole obligation for any and all claims, whether for breach of contract, warranty, tort (including we are responsible. Some states do not allow the exclusion or limitation of incidental or consequential purchaser. ALL EXPRESS AND IMPLIED WARRANTIES FOR THE PRODUCT, INCLUDING, WITHOUT the product to an authorized Meyer®/Diamond® Distributor/Dealer is the responsibility of the original all labor and/or parts necessary to correct such defects free of charge. Any cost incurred in returning negligence) or otherwise shall be limited to providing, through its authorized Distributor/Dealer network, in this limited warranty, and disclaims all liability for incidental, consequential, and special damages PERIOD HAS EXPIRED. Meyer Products LLC disclaims liability beyond the remedies provided for LAR PURPOSE, ARE LIMITED IN TIME TO THE TERM OF THE LIMITED WARRANTY PERIOD. NO WARRANTES, WHETHER EXPRESS OR IMPLIED, WILL APPLY AFTER THE LIMITED WARRANTY LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICU-

# How To Get Service:

In order to obtain service under this warranty, the original purchaser must

- Use all reasonable means to protect the complete snow plow package from further damage;
- Distributor/Dealer nearest you, go to www.meyerproducts.com, check the telephone directory or you may write to Meyer Products LLC at the address below, or call (216) 486-1313 for assistance; freight charges prepaid. Only Meyer®/Diamond® Distributors/Dealers are authorized to perform the obligations under this warranty. For the address and telephone number of the Meyer®/Diamond® uct was purchased or to any authorized Meyer®/Diamond® Distributor/Dealer, transportation and Return the claimed defective part to the Meyer®/Diamond® Distributor/Dealer from whom the prod-
- Meyer Products LLC Allow inspection of damaged parts and/or complete snow plow package if deemed necessary by

Provide maintenance record and receipts for required maintenance, if requested;

It is the responsibility of the original purchaser to establish the warranty period by verifying the original delivery date by immediately returning the attached Warranty Registration Card may be kept for that purpose. original delivery date. A bill of sale, cancelled check or some other appropriate payment record It is recommended, but not required, that the consumer verify the

# How State Law Applies:

state to state This warranty gives you specific legal rights, and you may also have other rights which vary from

# MEYER®/DIAMOND® SNOW PLOWS LIMITED WARRANTY

ဍ Meyer Products LLC warrants to the original purchaser of Meyer® and Diamond® brand products is authorized to change this warranty or to create any additional warranty on Meyer@/Diathat they will be free from defects in materials or workmanship, with the exceptions stated below. mond® products. person

# Warranty Period:

Coverage terminates if you sell or otherwise transfer the product. Some states do not allow limitations This warranty runs for a period of one year from the date of purchase for purchases of individual parts, components, or accessories; and for a period of two years from the date of purchase for any purchase of a complete Snow Plow Package; in each case for the original purchaser of the product on how long an implied warranty lasts, so the above limitation may not apply to you.

# Meyer Products LLC Responsibilities:

In the event repair is not possible or practical (as determined by Meyer Products LLC in its sole discretion), Meyer Products LLC will either replace the product with a new product of similar model and Meyer Products LLC will repair any product that proves to be defective in materials or workmanship. price, or refund the full purchase price, as determined by Meyer Products LLC

# Customer Responsibilities:

A copy of the maintenance record and pertinent receipts may be requested in Meyer Products LLC A written record of service must be maintained, along with receipts for maintenance Customer must keep the complete snow plow package serviced/maintained as recommended by materials purchased. the event of a claim.

# Exclusions:

This warranty does not cover:

- Problems caused by failure to follow the product instructions, failure to maintain the product as described in the Operator's Manual, or failure to maintain proper levels of lubricants;
  - Problems caused by contamination or restriction of lubricant systems, or damage resulting from rust, corrosion, freezing or overheating;
- Paint, or expendable snow plow parts such as pins, runners, cutting edges, chrome plating, springs and markers;
  - Damage to any vehicle to which the products are mounted, or the suitability of any product for vehicles which are not fitted with the appropriate heavy-duty snow plow service preparation parts;
- Damage caused by usage that is not in accordance with product instructions (use of the snow plow for any purpose other than plowing snow is considered misuse and abuse);
- <del>|</del> Any snow plow, or any part, component, or assembly thereof, which has been modified or tered;
- Problems caused by using accessories, parts, or components not supplied by Meyer Products
- Cost of tax, freight, transportation or storage charges, environmental charges, solvents, sealants, ubricants or any other normal shop supplies
  - vandalism, riot, explosion, lightning, earthquake, windstorm, , water, flood, or any other Acts of God; Problems caused by collision, fire, theft, hail
    - Liability for damage to property, or injury to, or death of any person arising out of the operation, maintenance or use of the covered product;
      - Products with missing or altered serial numbers;

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