

10/29/08 SLL

SPECIFICATIONS
HEAVY EQUIPMENT FILTERS
MISC. MATERIAL NUMBERS

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The filters shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

All filters are required to meet the original filter specifications.

Category Filters

- Category 1 - Air Filter
- Category 2 - Fuel Filter
- Category 3 - Hydraulic Filter
- Category 4 - Oil Filter
- Category 5 - Power Steering Filter
- Category 6 - Transmission Filter
- Category 7 - Water Filter
- Category 8 - Transmission Filter Kit

Orders will be placed using case quantities. Awarded vendor will forward a list of case quantities for each filter, to the PA Department of Transportation, Equipment Division, 17th Street & Arsenal Blvd., Harrisburg PA 17120.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302043

BLADE, WINTER, WIPER SNOW 22 IN

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The wiper blade shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

The blade shall be a winter, wiper, snow 22 in assembly. The wiper blade shall fit all wiper arms, i.e., clip-type and straight end arms and be completely rubber protected against snow, sleet or slush.

REFERENCE:

Anco 30-22" or equal.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302045

BLADE, WINTER, WIPER SNOW 20 IN

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The wiper blade shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

The blade shall be a winter, wiper, snow 20 in assembly. The wiper blade shall fit all wiper arms, i.e., clip-type and straight end arms and be completely rubber protected against snow, sleet or slush.

REFERENCE:

Anco 30-20" or equal.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302048

BLADE, WINTER WIPER SNOW 18 IN

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The wiper blade shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

The blade shall be a winter, wiper, snow 18 in assembly. The wiper blade shall fit all wiper arms, i.e., clip-type and straight end arms and be completely rubber protected against snow, sleet or slush.

REFERENCE:

Anco 30-18" or equal.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302052

BLADE, WINDSHIELD WIPER 22 IN

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The wiper blade shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

The blade shall be a winter, wiper, snow 22 in assembly. The wiper blade shall fit all wiper arms, i.e., clip-type and straight end arms and be completely rubber protected against snow, sleet or slush.

REFERENCE:

Anco 91-22" or equal.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302053

BLADE, WINTER WIPER SNOW 21 IN

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The wiper blade shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

The blade shall be a winter, wiper, snow 21 in assembly. The wiper blade shall fit all wiper arms, i.e., clip-type and straight end arms and be completely rubber protected against snow, sleet or slush.

REFERENCE:

Anco 91-21" or equal.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 340158

BLADE, WIPER 20"

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The wiper blade shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

The blade shall be a 20 in assembly. The wiper blade shall fit all wiper arms, i.e., clip-type and straight end arms and be completely rubber protected against snow, sleet or slush.

REFERENCE:

Anco C-20-UB" or equal.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 340159

BLADE, WIPER 22"

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The wiper blade shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

The blade shall be a 22 in assembly. The wiper blade shall fit all wiper arms, i.e., clip-type and straight end arms and be completely rubber protected against snow, sleet or slush.

REFERENCE:

Anco C-22-UB" or equal.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 340160

BLADE, WIPER 18"

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The wiper blade shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

The blade shall be an 18 in assembly. The wiper blade shall fit all wiper arms, i.e., clip-type and straight end arms and be completely rubber protected against snow, sleet or slush.

REFERENCE:

Anco C-18-UB" or equal.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302054

BULB, AUTO

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The bulb shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

Bulb shall be 12.8 volts.

REFERENCE:

Phillips P/N 4415A, or equal.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302055

BULB, AUTO

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The bulb shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

Bulb shall be 12 volts.

REFERENCE:

Wagner P/N 4416, or equal.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302056

BULB, AUTO

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The bulb shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

Bulb shall be 12 volts halogen.

REFERENCE:

Phillips P/N H6054, or equal.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 308145

BULB, AUTO BEAM SEAL

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The bulb shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

Bulb shall be 12.8 volts.

REFERENCE:

GE - 4411, or equal.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 308171

BULB, AUTO BEAM SEAL HALOGEN

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The bulb shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

Bulb shall be 12.8 volts.

REFERENCE:

GE-H-6024, or equal.

SPECIFICATIONS

MATERIAL NO. 330123

BULB, 4 INCH ROUND LED, AMBER

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The wing plow light shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

The unit shall have fully encapsulated electronics. It shall be rated to last 100,000 hours and exceed the SAE J845 minimum requirements.

Warning lamps shall have Smart-LED design features with 15 Scan-Lock flash patterns; 0.28 amp (average).

Vinyl mounted grommet shall be included.

Multiple lights can be synchronized to flash simultaneously or alternated using UFM8 (8 outlet), or ULF44 (4 outlet) electronic flashers.

12 VDC

Lamp shall include 6 inch integral wires.

WARRANTY:

Super-LED modules shall be warranted for a period of five (5) years. Written proof of this warranty by the manufacturer must be furnished by the bidder and attached to the bid.

The successful bidder shall be an authorized dealer for the proposed light and shall comply with the manufacturer's warranty or authorize a qualified dealer in the locality in which the unit is assigned, to do whatever is required to comply with the manufacturer's warranty without cost to the Commonwealth.

REFERENCE:

Whelen P/N 2GA00FAR

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 298619

RED INDICATOR – CLEARANCE LENS (POST 1988)

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The light shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

Weather sealed lamp, red polycarbonate reflector, 12-14 volt. Electrical connection shall be compatible with the "Grote" second generation ultra blue multi-ring plug series harness. Unit shall have a shock mounted bulb with a polycarbonate lens and housing.

Lamp shall have a overall diameter of 2.5 in. and shall fit a rubber grommet (Grote 91410). Plug area of connection shall be coated with Dielectric grease prior to packaging, and shall form a weather tight connection.

The entire assembled light must meet all the requirements as set forth by the Bureau of Traffic Safety, Department of Transportation, Commonwealth of Pennsylvania.

PACKAGING:

One (1) in plastic wrapper, viz pack, or box, with part number identification.

REFERENCE:

Grote 45832, Peterson 143R or equal meeting these specifications.

10/29/08 SLL

SPECIFICATIONS
MATERIAL NO. 302057

AMBER INDICATOR – CLEARANCE LENS (POST 1988)

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The light shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

Weather sealed lamp, amber polycarbonate reflector, 12-14 volt. Electrical connection shall be compatible with the "Grote" second generation ultra blue multi-ring plug series harness. Unit shall have a shock mounted bulb with a polycarbonate lens and housing.

Lamp shall have a overall diameter of 2.5 in. and shall fit a rubber grommet (Grote 91410). Plug area of connection shall be coated with Dielectric grease prior to packaging, and shall form a weather tight connection.

The entire assembled light must meet all the requirements as set forth by the Bureau of Traffic Safety, Department of Transportation, Commonwealth of Pennsylvania.

REFERENCE:

Grote 45833, or equal meeting these specifications.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302062

SPREADER LIGHTS

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The light shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

5 in (approx.) housed multi-purpose lamp. Lamp contains a par 36 sealed beam, 12.0 volts, rubberized shock absorbing weather-proof body (color-black) with mounting bracket stud, washer and nut necessary wiring lead (2) with manufactured heated shrink wrap molded .180 bullet terminal 36 in long 2 conductor cable.

REFERENCE:

REF: Grote 01-6493-90, Federal Signal 325039 PDOT, or equal meeting these specifications.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302063

RED INDICATOR – COMBINATION STOP TAIL TURN LAMP (POST 1988)

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The light shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

Red polycarbonate lamp, 12 volt. Electrical connection shall be compatible with the “Grote” second generation ultra blue series harness, with three (3) wire pigtail connection. Lamp shall meet the requirements of the FMVSS SAE Code.

Lamp shall have an overall diameter of 4.3125 in/10.954 cm and shall fit a rubber grommet

REFERENCE:

REF: Grote 52772, stop/turn/tail lamp, or approved equal meeting these specifications.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302065

PLOW LAMP KIT

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The plow lamp kit shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

The plow lamp (1 pair/LH & RH) shall be mounted in a resilient housing with lexan lens. The light shall be an integrated parking and turn signal light combination. The mounting shall be by a single mounting stud. Light shall conform to the FMVSS SAE Code H18P voltage = 12 volt. Lamps shall be complete with compatible 5 way Packard connector installed on Department trucks.

REFERENCE:

Grote P/N 64291-4 (1 pair), or equal.

SPECIFICATIONS

Material Number 302064

WING PLOW LIGHT

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The wing plow light shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

The system shall contain one (1) directional head assemblies that is mounted in aluminum housing and must be completely sealed for long life and durability. The unit must be made of natural aluminum and designed to mount to a plow to warn traffic when the plow is in use.

The lighthouse assembly that is for use when the plow is in use shall measure an approximate 4-3/8 in x 3-7/8 in x 3-9/16 in. Larger units are not acceptable due to the size constraint of the mounting area.

The unit must be completely encapsulated and have a 20 ft TPR heavy duty 4 conductor cable. Other types of cables are unacceptable due to the harsh environment these lighthouses are used in. The four conductors must be used for power, ground, Scan-Lock flash pattern and synchronize control feature.

There must be five Scan-Lock flash patterns and steady burn to choose from. Each of the five patterns shall have a Phase 1 and Phase 2. When using multiple lighthouses, the synchronized wires are attached to alternate Phase 1 and Phase 2 patterns. The unit will have a non-volatile memory and stay in the pattern selected. Units that do not have a synchronization feature are not acceptable.

The lighthouse shall have a TIR3 Super-LED panel which contains a maximum of three (3) individual RED Super-LEDs (Generation 3.5) in a straight row that have a life expectancy of at least 100,000 hours. The panel shall contain ballast and TIR lens, and shall be mounted to an aluminum base, completely encapsulated for long life and durability. The unit shall draw no more than .25 amps.

The lens must be made of clear polycarbonate and must have a smooth outer lens (for self cleaning) with built-in optics to insure maximum light output.

WARRANTY:

Super-LED modules shall be warranted for a period of five (5) years. Written proof of this warranty by the manufacturer must be furnished by the bidder and attached to the bid.

The successful bidder shall be an authorized dealer for the proposed light and shall comply with the manufacturer's warranty or authorize a qualified dealer in the locality in which the unit is assigned, to do whatever is required to comply with the manufacturer's warranty without cost to the Commonwealth.

REFERENCE:

Whelen P/N WPLOW1R, RB6TAPPD, Grote 78562, or equal meeting these specifications.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302067

REFLECTOR – AMBER

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The reflector shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

Reflector - Amber

Reflector shall reflect light visible at approximately six hundred (600) yards. The reflector shall be made of molded acrylic that has been hermetically sealed during the assembly process. It shall possess a minimum of 45, 000 microprisms per square inch. The reflector shall be 2-7/8 in - 3 in in diameter and shall be .011 to .015 in thick with an industrial strength adhesive on its backside with any easy peel able throw-away protector. Plastic assembled or tape reflectors are unacceptable. Shall be in compliance with FMVSS 108 and SAE standards J578c and J575e.

PACKAGING:

Maximum fifty (50) per box, with part number identification.

REFERENCE:

Grote P/N 41143, or equal.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302066

REFLECTOR – RED

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The reflector shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

Reflector - Red

Reflector shall reflect light visible at approximately six hundred (600) yards. The reflector shall be made of molded acrylic that has been hermetically sealed during the assembly process. It shall possess a minimum of 45, 000 microprisms per square inch. The reflector shall be 2-7/8 in - 3 in in diameter and shall be .011 to .015 in thick with an industrial strength adhesive on its backside with any easy peelable throw-away protector. Plastic assembled or tape reflectors are unacceptable. Shall be in compliance with FMVSS 108 and SAE standards J578c and J575e.

PACKAGING:

Maximum fifty (50) per box, with part number identification.

REFERENCE:

Grote P/N 41142, or equal.

MATERIAL NO.

302068 7-WAY

FEMALE PLUG

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The plug shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

1. 7-Way split pin receptacle meeting SAE J560B, J553, and J555A.
2. Exact location shall be determined upon award of bid prior to pilot model.
3. Wiring shall be in conformance with ATA Color Coding System.
4. Sealed and weather-resistant.
5. Replaceable circuit breakers (15 AMP/ or 20

AMP). REFERENCE:

Grote P/N 82-1002, Pollak P/N 11-720 P, or equal.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302058

RED INDICATOR -- CLEARANCE LENS (PRE-1988)

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The light shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

Weather sealed lamp, amber polycarbonate reflector, 12-14 volt, with two wire pigtail connection. Unit shall have a bulb with a polycarbonate amber lens and "Poly" type housing. The bulb life shall be rated for a minimum 15,000 hours.

Lamp shall have an overall diameter of 2.5 in and shall fit a rubber grommet. Two wire pigtail connection and plug area of lens connection shall be coated with Dielectric grease prior to packaging, and shall form a weather tight connection.

REFERENCE:

The following modes are acceptable provided they contain the specified equipment and meet all specifications contained herein:

Each kit shall include: (1) Red Sealed Lens

Reference Numbers

Truck-Lite 10205R

Or

Grote 45832

Or

Peterson 143R

(1) Mounting Kit

Reference Numbers

Truck-Lite 10725

Or

Grote 43690/67050

Or

Peterson 142-09

(1) Rubber Grommet
Reference Numbers
Truck-Lite 10414/10700
Or
Peterson 142-18

REFERENCE (CON'T):

The following modes are acceptable provided they contain the specified equipment and meet all specifications contained herein:

(1) Molded Plug-in Pigtail
Reference Numbers
Truck-Lite 10414/94902

Or
Grote 66850

Or
Peterson 142-19

SPECIFICATIONS

MATERIAL NO. 302060

AMBER INDICATOR – CLEARANCE LENS (PRE-1988)

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The light shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

Weather sealed lamp, amber polycarbonate reflector, 12-14 volt, with two wire pigtail connection. Unit shall have a bulb with a polycarbonate amber lens and “Poly” type housing. The bulb life shall be rated for a minimum 15,000 hours.

Lamp shall have an overall diameter of 2.5 in and shall fit a rubber grommet. Two wire pigtail connection and plug area of lens connection shall be coated with Dielectric grease prior to packaging, and shall form a weather tight connection.

REFERENCE:

The following modes are acceptable provided they contain the specified equipment and meet all specifications contained herein:

Each kit shall include: (1) Amber Sealed Lens

Reference Numbers

Truck-Lite 10205Y

Or

Grote 45833

Or

Peterson 143A

(1) Mounting Kit

Reference Numbers

Truck-Lite 10725

Or

Grote 43690/167050

Or

Peterson 142-09

(1) Rubber Grommet
Reference Numbers
Truck-Lite 10414/10700
Or
Peterson 142-18

The following modes are acceptable provided they contain the specified equipment and meet all specifications contained herein:

(1) Molded Plug-in Pigtail
Reference Numbers
Truck-Lite 10414/94902

Or
Grote 66850
Or
Peterson 142-19

SPECIFICATIONS

MATIAL NO. 308659 7-WAY FEMALE SOCKET

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The plug shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

- 7-Waysplit pin receptacle meeting SAE J560B, J553, and J555A.
- Wiring shall be in conformance with ATA Color Coding System.
- Sealed and weather-resistant.

REFERENCE:

Grote P/N 87270 or equivalent

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302042

AIR DRYER (MIDLAND)

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The air dryer shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

The design of the kit shall provide both the spin-on desiccant filter and the coalescing filter.

REFERENCE:

Midland P/N DQ6026 kit, or equal.

10/29/08 SLL

SPECIFICATIONS

**AIR DRYER <BENDIX- AD-IP
PURAGUARD COALESCING
TYPE CARTRIDGE
MATERIAL NO. 304014**

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The air dryer shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

PERFORMANCE:

The proposed unit shall be identical with the standard or improved model and a current production unit in use by the industry for the past twelve months preceding this bid opening.

It shall be the responsibility of the bidder to assure that the proposed equipment conforms to the specifications and performs satisfactorily according to these specifications.

SPECIFICATIONS:

The cartridge package shall include O rings (quantity 2), lubricant and there shall be a disassembly, assembly, unit testing guide. Unit must be a Coalescing type cartridge.

REFERENCE:

BENDIX AD-IP P/N 109493 PGX (remanufactured without exchange (outright) or BENDIX AD-IP P/N 065624 PG (New), or equal. COALESCING CARTRIDGE

WARRANTY:

The vendor will replace, free of charge within three (3) years/350,000 miles warranty on equipment and service from date of sale, any air dryer kit which in the judgment of the manufacturer has failed because of defective material or workmanship, provided it is shown to be properly mounted, and not subject to the above in operation or assembly.

SPECIFICATIONS

MATERIAL NO. 304015

BRAKE DRYER, AIR

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The air dryer shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

The KIT shall include (1) Desiccant Cartridge, (1) Desiccant Cartridge O-Ring , (1) Outer Housing O-Ring, Grease Lube and there shall be a disassembly, assembly, unit testing guide.

REFERENCE:

Bendix P/N 107796-Kit or approved equivalent.

SPECIFICATIONS

MATERIAL NO. 302069

ALARMS – BACKUP TYPE, STANDARD

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The alarm shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

Shall consist of a solid state electronic circuit and alarm assembly including all items necessary to provide operational capability. It shall be capable of operation with 12, 24, or 36 volt electrical systems, positive or negative ground and shall not be damaged by reverse polarity. The alarm shall sound at intervals of 1 to 2 warnings per second at a sound level $112 \text{ db(A)} +4$ measured at a distance of four (4) feet directly behind the rearmost point of the vehicle at a height of four (4) feet above the ground.

The housing shall be of corrosion-resistant metal or 30% glass fiber reinforced type 6 nylon (tensile strength 23,000 psi minimum and 34,000 psi flexural strength minimum). Entire alarm shall be steam cleanable.

WARRANTY:

There shall be a life time warranty from the date of sale, on any alarm which in the judgment of the manufacturer has failed because of defective material or workmanship, provided it is shown to be properly mounted, and not subject to the above in operation or assembly. A copy of the installation instructions and warranty shall be packed in each boxed alarm.

The successful bidder shall be an authorized dealer for the proposed back-up alarm and shall comply with the manufacturer's warranty or authorize a qualified dealer in the locality in which the unit is assigned, to do whatever is required to comply with the manufacturer's warranty without cost to the Commonwealth.

REFERENCE:

The following models are acceptable provided they contain the specified equipment and meet all specifications contained herein:

REF: ECCO 850, Prece-380, Grote 73030 OR EQUAL meeting these specifications.

SPECIFICATIONS

MATERIAL NO. 302070

ALARMS – BACKUP TYPE, SHOCK MOUNTED

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The alarm shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

Shall consist of a solid state electronic circuit and alarm assembly including all items necessary to provide operational capability. It shall be capable of operation with 12, 24, or 36 volt electrical systems, positive or negative ground and shall not be damaged by reverse polarity. The alarm shall sound at intervals of 1 to 2 warnings per second at a sound level 112 decibels measured at a distance of four (4) feet directly behind the rearmost point of the vehicle at a height of four (4) feet above the ground. Pigtail shall be 16" long with molded .180 bullet terminal.

The housing shall be of corrosion-resistant metal or 30% glass fiber reinforced type 6 nylon (tensile strength 23,000 psi minimum and 34,000 psi flexural strength minimum). Entire alarm shall be steam cleanable.

The housing shall be capable of being mounted in a 4in/10cm rubber grommet.

Alarm shall be in accordance with SAE Type A.

SPECIFICATIONS
ALARM – BACKUP TYPE, SHOCK
MOUNTED MATERIAL NO. 302070

PACKAGING:

One (1) per box, with part number identification.

WARRANTY:

There shall be a life time warranty from the date of sale, on any alarm which in the judgment of the manufacturer has failed because of defective material or workmanship, provided it is shown to be properly mounted, and not subject to the above in operation or assembly. A copy of the installation instructions and warranty shall be packed in each boxed alarm.

REFERENCE:

The following models are acceptable provided they contain the specified equipment and meet all specifications contained herein:

REF: ECCO 450-PEN, Grote 01-7316-70 (112 decibel) OR EQUAL meeting these specifications.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302071

MIRROR HEAD – WEST COAST

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The mirror head shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

The mirror head (West Coast) shall be minimum 7 in x 16 in head, minimum 20 gauge steel finished in baked white enamel. The back of the head, (steel side) shall be ribbed for added strength, and shall be a one piece back. The mounting studs shall be ¼ in – 5/16 in NC x (minimum) 2 in long. Stud shall be SAE, metric is unacceptable. Studs shall be fitted with acorn nuts. All hardware metric is unacceptable. Studs shall be cadmium plated or stainless. Glass shall be minimum, double strength quality, and shall have a minimum reflective surface of 87 sq. in. Glass shall be cushioned around its entire perimeter in rubber or vinyl.

REFERENCE:

REF: Grote 16101, Peterson 616W, Trucklite 97806, or equal, meeting these specifications.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO.302074

MIRROR, BLIND – SPOT – ELIMINATION

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The mirror shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

Minimum 8 in, diameter stainless steel or aluminum head with mirror. Mirror shall be a conventional convex mirror, and shall not be of the half-round cross view type. Mounting shall be minimum 1/4 in x 20 female ball stud with a L-bracket. Mirror shall be cushioned in rubber or vinyl.

REFERENCE:

REF: Trucklite 97803 with “L” Bracket, Grote 12183, or equal.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302075

MIRROR, CONVEX ROUND 8" HEATED RETRACTABLE

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The mirror shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

PERFORMANCE:

The proposed unit shall be identical with the standard or improved model and a current production unit in use by the industry for the past twelve months preceding this bid opening.

It shall be the responsibility of the bidder to assure that the proposed equipment conforms to the specifications and performs satisfactorily according to these specifications.

SPECIFICATIONS:

Minimum 8 in. diameter, convex round heated type. Mirror back shall be stainless steel with mirror glass shock mounted and sealed. The minimum reflective surface shall be 46 sq. in. There shall be a ball stud offset 2" from center. Wiring shall be insulated and jacketed and shall extend a minimum of 24 in from the head.

REFERENCE:

Grote 12813, or equal

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302073

MIRROR, CONVEX – RECT. – 5 IN (MIN.) – 6 IN (MAX.) X 8 IN (MIN.) 9 IN (MAX.)

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The mirror shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

5 in. (min.) – 6 in. (max.) x 8 in. (min.) – 9 in. (max.) stainless steel head with mirror glass and stainless steel – L-bracket. Mounting shall be ¼ in. ball stud with sphere nut.

There shall be minimum of three (3) screws for stud tightening. Stud shall be offset from center. Mirror shall be cushioned in rubber or vinyl.

REFERENCE:

Chem Cal P/N 10681

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 308968

MIRROR, HEATED, WEST COAST TYPE (HEAD ONLY)

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The mirror shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

6 in x 16 in, minimum, rectangular West Coast type. Mirror back shall be stainless steel with mirror glass shock mounted and sealed. The heating element shall affect a minimum of 95% of the rear surface on a first surface chrome glass. Minimum reflective surface shall be 90 sq. in. The wires shall be fitted in such a way that the mirror-glass element can be changed by unplugging the two wire lead. There shall be two (2), 3/8 in. "T" bars or studs, for mounting. There shall be matching 3/8 in acorn nuts. Wiring shall be insulated and jacketed and shall extend a minimum of 24 in from the head. The wires shall be compatible with those on the Delbar HR-H44. All hardware shall be cadmium plated, at a minimum.

REFERENCE:

REF: Rosco P/N 716SSDELH or equal.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302076

AUGER 6"

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The auger shall comply with all current applicable Federal Safety standards and OSHA requirements.

Standard manufacturing practices and tolerances shall be approved by the Chief of the Equipment Division, in accordance with the latest codes, standards and practices of the following professional organizations:

RE: American Association of State Highway & Transportation Officials
(AASHTO)
American Institute of Steel Construction (AISC)
American National Standard Institute (ANSI)
American Society for Mechanical Engineers (ASME)
American Society for Testing and Materials (ASTM)
American Welding Society (AWS)
British Standards Institute (BSI): Limits and Fits
Society of Automotive Engineers (SAE)

The purpose of this specification is to describe an auger capable for being used in the Departments existing tailgate spreaders.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

Each auger shall include, stub shaft coated with anti-seize compound (wrapped to retain lubricant) and 2 in. hex head bolt Grade 5, with locknut of sufficient length as shown EQN-6 sheet 2 of 3. Additionally the ID of bored auger shall also be lubricated with anti-seize compound and the shaft sealed with a plastic wrap. The entire auger shall be coated with

SPECIFICATIONS (CON'T):

Rhomar (Tel: (417) 866-5592) encapsulant (flexible polymer skin), or Task Master NWAC 120-4 (Tel: (215) 453-0262), no substitute. Certificate in writing confirming the use of one of these two (2) anti-corrosion products shall be submitted with the pilot and complete order. Pilot model shall be delivered to the Department of Transportation, Equipment Division, 17th Street &

PACKAGING:

Each layer of augers must be individually banded by each layer, on wooden pallets.

The pallets shall be stacked so that the open end is facing to the outside of the truck or the pallets shall be of the design that has side slots for the forks. The maximum number of augers per pallet is 25. Hardware and stub shafts shall be securely fastened to each auger.

DELIVERY:

All material must be delivered within 95 days after the approved purchase order.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302077

MOTOR – HYDRAULIC – SPREADER – TAILGATE – AUGER SENSORS STAINLESS
AND RUBBER TROUGH 1994 ---

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The motor shall comply with all current applicable Federal Safety standards and OSHA requirements.

The purpose of this specification is to describe a hydraulic motor capable of driving a 6” single auger in a tailgate spreader, for stainless steel and rubber trough spreader built per the Department specifications 1994, and on.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

Each unit shall be clean, lubricated and serviced ready for immediate operation.

SPECIFICATIONS:

DIMENSIONS:

Shaft Keyway: 1.25 dia. x 2.375 length (from flange mounting surface), with keyseat to accept a key of .313 width.

NOTE: The auger motor is a standard, no substitute. It is the responsibility of the successful vendor to ensure that the motor assembly is designed and manufactured in such a way as to ensure compatibility and serviceability with the Department’s hydraulic system/s.

REPAIR PARTS AND MANUALS:

An adequate stock of repair parts shall be maintained within the Commonwealth. One (1) copy of the current Repair Parts list shall be furnished with each unit. In addition one (1) copy of the Parts and Service Manual shall also be forwarded to the Equipment Division, c/o Sherri Linen.

PAINTING:

Per Manufacturer’s recommendation.

PACKAGING:

All motors shall be coated with a corrosion resistant coating (e.g., oil) and individually sealed in plastic with ports sealed and boxed and shipped in a larger box banded on a wooden pallet/s not exceeding four (4) feet high.

REFERENCE:

The following model is acceptable provided it contains the specified equipment and meets all specifications contained herein:

Hydraulic Motor Kit Part #W80509

- To include: 100 Pulse Auger Motor Sensor.
Plastic plugs for sensor removal.
Male and female caps.
1 small tube of Die electric grease

Model

RE	-	32	-	08	-	14	-	1	-	Z5
		DISPLACEMENT CU. IN.		4 BOLT FLANGE MOUNTING		1 1/4" STRAIGHT SHAFT		ROTATION		OPTIONS

NOTE: PORTS 7/8" O= RING

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302078

SPEED SENSOR

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The speed sensor shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

The speed sensor shall be a single sensor with 50 Pulse 4 Pin.

PACKAGING:

The sensors may be shipped in one (1) package and the screws may be shipped in a separate package. Both items shall be in one (1) box with part number identification.

REFERENCE:

White Hydraulic P/N 200018097, or equal.

MATERIAL NO. 302079

MOTOR – HYDRAULIC – SPREADER – TAILGATE – SPINNER 3.0 CU. IN.

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The motor shall comply with all current applicable Federal Safety standards and OSHA requirements.

The purpose of this specification is to describe a hydraulic motor capable of providing hydraulic fluid power to propel a spinner which will project anti-skid materials onto road surfaces.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

Each unit shall be complete with accessories, equipment, parts and options properly installed and operative.

Each unit shall be clean, lubricated and serviced ready for immediate operation.

SPECIFICATIONS:

DIMENSIONS:

Gerotor width: ¼”
Hydraulic port opening: ½” NPT
Flange mount: 4 bolt
Shaft keyway: 1” woodruff
Shaft diameter: 1”
Displacement: 3.0 cu. In/rev. maximum

PACKAGING:

All motors shall be individually boxed and shipped in a larger box banded on a wooden pallet/s not exceeding four (4) feet high.

All hydraulic openings shall be capped, and motor shall be lubricated.

REFERENCE:

The following models are acceptable provided they contain the specified equipment and meet all specifications contained herein:

Char-Lyn #101-1001-009, TB0050FP100AAAB,
White RS03010100, Dan Foss OMPX 50cc motor,
Parker Ross MK 031310AAAB.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302081

BEARING SPREADER 1-1/4"

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The bearing shall comply with all current applicable Federal Safety standards and OSHA requirements.

The purpose of this specification is to describe a bearing capable for being used on our tailgate spreaders.

Each unit shall be clean, lubricated and services ready for immediate operation.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

The bearing shall be fully seated within the housing. The bearing shall also be flush mounted to the exterior bearing housing lip. Bearing found to be otherwise mounted shall be rejected.

Grade: Reference: American Friction Bearing Manufacturer's Association #1, Precision.

Type: Self aligning, anti-friction, thrust, re-lube type.

Mounting: 2 bolt (square holes) flanged unit type. See drawing.

Shaft Diameter: 1 1/4 inch.

Locking: Retaining collar shall be eccentric with set screw.

Housing: Case, ductile or malleable iron.

REFERENCE:

REF: SAFTD 206-20PG, or equal.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 302082

CYLINDER – HYDRAULIC – SNOW PLOWS –DOUBLE ACTING –FITS MACK GRANITE TRUCKS

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The cylinder shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

The purpose of this specification is to describe a cylinder capable of carrying and lifting a Snow Plow with a weight range of 2400# to 3500#. The operating pressure shall not normally exceed 2500 PSI.

Each unit shall be clean, lubricated and serviced ready for immediate operations.

Each unit shall bear the manufacturer's model number and shall incorporate an individual serial number.

SPECIFICATIONS:

DIMENSIONS:

Rod Diameter - Not less than 2"

Cylinder Diameter - Not less than 4"

Stroke - 10"

Collapsed Length - 20"

Mounting Holes - Not less than 1", or more than 1-1/64"

Hydraulic Cylinder to be of current manufacture with hard chrome plated rod plunger. To be fitted with Chevron package glands and multiple AV type packing with protective wipers. Cylinder to be fitted with 3/8" NPT hose connection on the barrel of cylinder. As per attached drawing.

PAINT:

Gloss Black

REPAIR PARTS AND MANUALS:

An adequate stock of repair parts shall be maintained within the Commonwealth. Once (1) copy of the current Repair Parts list shall be furnished with each unit.

PACKAGING:

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION – COMMERCIAL PACKAGING OF SUPPLIES AND EQUIPMENT. Cylinder shall be shipped collapsed and any/all non-painted surfaces shall be coated with oil and wrapped for protection, and placed in a cylindrical tube.

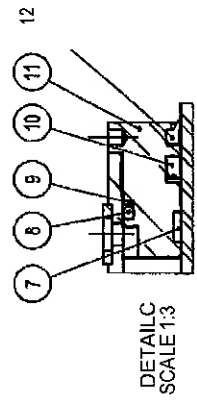
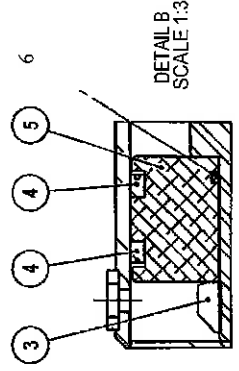
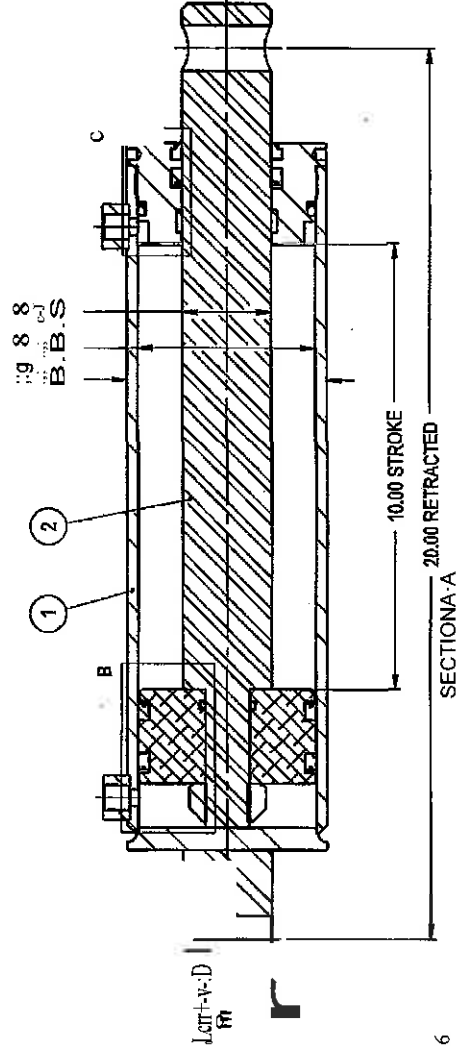
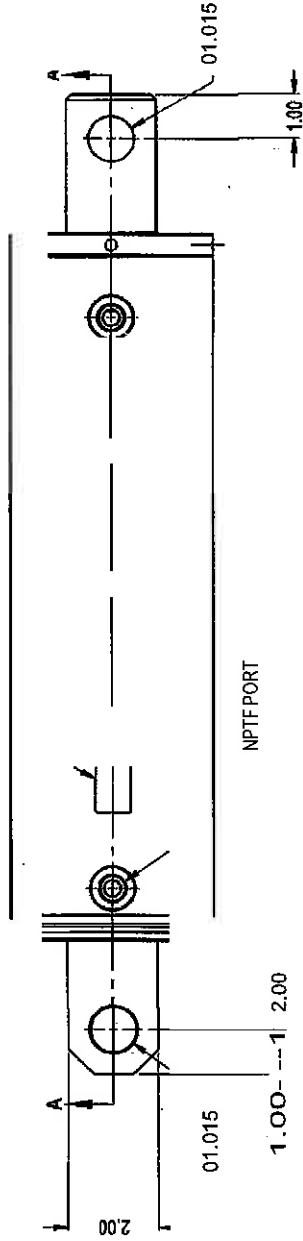
Cylinder shall be placed in tube and shipped in a larger box (not more than 20 per box).

REFERENCE:

Best Metal Products Reference Number 5002326-0 (Part No. 395698).

STEEL STAMP
S-II585-NP-PROT01TYPE
2500 PSI
MMIYYYY

copy



ITEM	Part Number	Assembly Description
1	5002326-1	Leaker Subassembly
2	5002326-2a	Pusher Rod
3	2313500	1.000" ID, Slotted Lock
4	2135300	Dynamic Seal, Polyfill
5	2290700	Pinion, Polyacet
6	1821400	Static Seal O-ring, TIG
7	3022510	2.250" OD X 2.000" ID X
8	1834200	Shaft Seal O-ring, TIG
9	3934200	Shaft Seal Backup RI
10	2124400	Dynamic Seal, Polyfill
11	1400372	Handbook, Internal S
12	1220310	Red Marker, D 82x112

REV.	DESCRIPTION	RELEASE CLASS	ECN	DATE	BY	CHK BY
A	INITIAL RELEASE		3874	10/24/12	0886	JP-PR
B	CHANGED TO CHROME ROD WAS NITRO		3888	11/27/12		

DESCRIPTION: 4.0008 X 2.0008 X 10.0008 DA CYL
 CUSTOMER: SOMERSET WELDING
 CUSTOMER P/N: S-835-NP-PROT01TYPE
 DESIGNED BY: BK | CHECKED BY: - | DATE: 9/10/2012
 MAX PRESSURE: 2500 | FINISH: GREY PRIMER
 DWG NO: 5002326-0 | WEIGHT: 38.71
 SCALE 1:4

SPECIFICATIONS

MATERIAL NO. 302083

VEHICLE MOUNTED INFRARED SENSOR

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The sensor shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

Item	Description
RW-1	Basic temperature indicating system
Accuracy: greater)	+/- 1% of full scale or +/- 1° C (whichever is
Repeatability:	+/- 0.50 of full scale
Emissivity:	.96
Field of View:	10 Degrees
Operating Voltage:	12 VDC unregulated
Operating Ambient Temperature:	-40° to +75° C
Temperature Display Range:	-40° to +90° C
Response Time:	100 milli-sec at sensor with 500 milli-sec display buffer
Cable:	12 ft. Shielded or minimum 8 ft. Shielded
Weight:	Sensor Head; 5oz. Display; 4 oz. (minimum)
Sensor Head Features:	Rugged 4 inch long anodized aluminum Aerodynamic Enclosure, AeroFlush, self-cleaning lens, EMI/RFI Shielded electronics,

mirror bracket mounting typical.

Display Features:

Standard 2 inch diameter guage enclosure or 2 Inch Diameter pedestal mounting. Illuminated Auto Dim display with **air** temperature and **road** surface Temperature. Freezing threshold audio and visual alert. Fahrenheit.

Vibration:

4 g's two axis, Sensor Head and Display

Shock:

100 G's I/R sensor element

REFERENCE:

Commercial Vehicle Systems P/N Roadwatch1, or equal.

SPECIFICATIONS

MATERIAL # 319921

L.E.D. WARNING LIGHTS

The warning lights described herein will be used for off/on road equipment such as cars, trucks, motor graders, loaders, etc. requiring safety lights. The following specification details a 360 degree high quality self-contained LED mini lightbar for use on a variety of vehicle types:

1. The LED mini lightbar shall meet J845 May97, Class 1 in amber and shall be AMECA Certified. The permanent mount LED mini bar shall feature 14 multiple flash patterns and have a minimum of a six inch pigtail.
2. The LED mini lightbar shall feature Solid-State Circuitry, Polarity, Protection and no moving parts for highest degree of reliability. The mini lightbar shall be 12 VDC nominal, standard. The mini bar shall have a published average amp draw of 3.6 amps at 12 VDC (10.8 amp peak amp draw). The mini lightbar shall allow operation without degradation of intensity or flash rate between 10-16 VDC.
3. The LED lightbar shall feature a heavy duty extruded aluminum base. The permanent mount LED mini lightbar shall not exceed 5-3/32" in height, 17-1/4" in width, and 6-5/16" in depth. The LED mini lightbar shall have a built-in electronic flasher. The LED mini lightbar shall be constructed within six (6) 400 series linear super-LED with Deutsch connector modules resulting in a total of 72 super LED's. The light head shall utilize a vacuum metalized reflector, and optic collimator. The LED mini lightbar shall use bolts for permanent mounting. The LED mini lightbar dome shall feature a smooth outer surface and made of polycarbonate material.
4. The LED mini lightbar shall be warranted for sixty months by the manufacturer from the date installed.

5. Unit must be capable of being mounted on a surface, or on a self-leveling mount. All mounting hardware. A soft rubber gasket or mounting pad shall be provided to form a weatherproof seal between the housing and vehicle roof, affording maximum vibration isolation.

Reference: Whelen Model 01-0687181A1P or a pre-approved equal.

SPECIFICATIONS

MATERIAL # 319920

ROUND LED WARNING LIGHTS

The warning lights described herein will be used on off/on road equipment such as cars, trucks, motor graders, loaders, etc. requiring safety lights.

1. Shall be SAE Class 1 Certified
2. Polycarbonate base
3. Shall have full reverse polarity protection
4. 100% Solid State Technology
5. Fully encapsulated for moisture, vibration and corrosion resistance
6. 75 Signal Alert flashes per minute
7. Permanent mount. Shall be supplied with 6 inch pigtail
8. 12 VDC
9. Hard coated dome
10. Shall have a 5 year Heavy-Duty Professional warranty

Reference:

Whelen L10LAP

SPECIFICATIONS

MATERIAL NO. 302084

REVOLVING WARNING LIGHT

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The light shall comply with all current applicable Federal Safety standards and OSHA requirements.

The warning lights described herein will be used on off/on road equipment such as cars, trucks, motor graders, loaders, etc. requiring safety lights:

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

1. The light shall operate from nominal 12V DC power source. Housing shall provide rigid support to the lamp, motor and drive train.
2. Dimensions (minimum) HEIGHT: 7-1/4 in, DIAMETER: 8-7/16 in
3. Lamps shall consist of two Par 36 sealed beam incandescent lamps to provide 35,000 beam candlepower. Rotation of sealed beam lamps shall produce approximately 80 flashes per minute.
4. Lamp holder shall be of reinforced thermoplastic. Spring clips shall be used to hold lamp in holder, and electrical connection to the lamp shall be made when the lamp is properly placed in holder. Screw terminals or spade connections to the lamp are unacceptable.
5. Motor shall be permanently lubricated, totally enclosed, high torque, permanent magnet type operating from nominal 12 Volt DC power source and shall be filtered to eliminate radio frequency interference.
6. Drive train shall utilize a gear drive assembly with the worm-gear being part of the motor armature. A slip clutch arrangement to prevent motor damage shall be incorporated in the drive train. Rubber bands or friction drive units are unacceptable.
7. The lens retainer shall be fabricated from a non-corrosive metal or molded from a heavy duty plastic. The plastic shall be polycarbonate, ABS, or equal. The retainer shall be secured by a stainless steel bolt and nut. Luggage-clamp type fasteners are not acceptable. Lens shall be capable of removal without disturbing the housing or mounting.

8. Unit shall be capable of being mounted on a surface, or on a self-leveling mount. All mounting hardware including wire (20 ft. of #14 gauge, min.), lighted toggle switch and roof mounting bolts for light shall be included. A soft rubber gasket or mounting pad shall be provided to form a weatherproof seal between housing and vehicle roof, while affording maximum vibration isolation.
9. Lens shall be clear, amber in color and shall be made of heat resistant, impact resistant plastic. Lens size shall meet the following specifications to maintain interchangeability of lens. No deviation. Outside Diameter - Maximum 8-3/8 in measured at bottom, including the lip. Outside Diameter - 7-3/4 in minimum, 7 7/8 in maximum, at the bottom
10. The lens shall comply with SAE-J575, A Test for Motor Vehicle Lighting Devices and Components, Section 4.8, for warpage, and its color with SAE Standard J-578", "Color Specification for Electric Signal Lighting Devices", for chromaticity.
11. Warranty shall be for two years on all parts and workmanship.
12. Equipment bid shall be SAE approved for vibration, corrosion, color, moisture, dust, temperature, and photometric.

REFERENCE:

The revolving warning lights shall be one of the following approved models: ARROW Model 530 or 550, modified (99005), FEDERAL Signal Model TARGET TECH 444112-02PDOT, Grote 01-7622-88, Whelen RB6TAPPD

SPECIFICATIONS

MATERIAL NO. 302085

ROTATING BEACON LIGHT – RECTANGULAR HOUSING

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The light shall comply with all current applicable Federal Safety standards and OSHA requirements.

The purpose of these specifications is to describe a safety light capable of being mounted on off road/on road equipment.

The light will be permanently mounted.

Unless otherwise specified, each unit shall include all specified accessories parts, equipment and options made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

Each unit shall be completed with accessories, equipment, parts, options properly installed and operative.

Each unit shall be clean serviced ready for immediate operation.

1. The primary warning system shall consist of 2 independent motor driven parabolic reflectors and a mirror assembly.
2. The motors shall be a high torque, long life (rated for 10,000 hours), permanent magnet motor, 12 volts DC. Each motor shall have RFI suppression for Radio frequency inference.
3. The parabolic reflectors shall rotate around a stationary H1, 55-watt halogen heavy-duty long life lamp (rated at 800 hours plus). Each parabolic reflector shall produce a minimum of 80,000 candlepower. Each reflector, bulb and motor assemble shall be designed of a snap in design for easy assembly replacement. No fasteners holding this assembly to the base are allowed.

Note: Flash rate shall not exceed current PA Motor Vehicle Code.

4. Unit must meet SAE J845, class 1 specifications and certified by independent test laboratory. The light must also be certified by AMECA.

5. Unit must be capable of being mounted on a surface, or on a self-leveling mount. All mounting hardware including wire (20ft.), of 14 gauges lighted toggle switch and roof mounting bolts shall be included. A soft rubber gasket or mounting pad shall be provided to form a weatherproof seal between housing and vehicle roof, while affording maximum vibration isolation.

6. The lens shall be of Amber color and meets SAE 575 specifications. Material must be of lens grade polycarbonate.

The top of the lens shall be textured to prevent sunlight from entering and degrading the warning light effectiveness. The sunscreen shall also prevent the appearance that the light bar signal may be on due to light bouncing off the reflectors and mirror.

7. The base of the light bar shall be made of Impact-resistant polycarbonate for non-corrosion.

The length shall be a minimum of 15 inches and not exceed 16 inches. The depth at the dome shall be a minimum of 6 inches. The height shall be a minimum of 5 inches.

PACKAGING:

One (1) per box, part number identification, includes one (1) copy of the repair parts list and installation procedure for each light.

REFERENCE:

REF: Whelen G1PADOT, or equal.

SPECIFICATIONS

MATERIAL NO. 304010

HYDRAULIC FILTER

SPECIFICATIONS:

The purpose of this specification is to describe a replacement hydraulic filter cartridge and O-rings for multiple applications. Each hydraulic filter must be accompanied with two (2) O-rings (one (1) for each specified application) per package. One (1) O-ring shall fit the Parker Hannifan housing and one (1) O-ring shall fit the MP-Filtri housing. All filters must be packaged one (1) per box and plainly marked with the part number. Each filter must either be individually shrink-wrapped or protected with plastic covering.

All filter bids on this requisition are required to meet original filter specifications. See part number of filter referenced.

REFERENCE:

Parker Hannifan Filter P/N 93 26 67Q10 or MP-Filtri P/N MP3607-2X, or approved equal meeting this specification.

Parker Hannifan O-ring P/N N72244 or approved equal meeting this specification.

MP-Filtri O-ring P/N 1068039 or approved equal meeting this specification.

DELIVERY:

All material must be delivered within 60 days after receipt of the purchase order.

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 304016

GUARD,SPLASH-RUBBER-TRAILER & TRUCK

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The splash guard shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

Shall be manufactured of oil and salt resisting, molded natural or synthetic rubber. Shall be reinforced with nylon or cotton cord.

The body of the splash guard shall be a minimum of .09375 in. The trim area shall be 3/8 in. minimum thickness. The body area within the outside dimensions of 24"W by 30" H, tolerances +/- .250 in. The weight of the splash guard shall be 6 lbs., minimum.

NOTE: All dimensions having +/- tolerance shall be within that tolerance range. All dimensions that are stated as a minimum are that, but the minimum may be exceeded.

Unacceptable: Anti-sail type splash guard.

REFERENCE: TW 823-5092

10/29/08 SLL

SPECIFICATIONS

MATERIAL NO. 304017

GUARD, SPLASH – RUBBER – TRAILER & TRUCK

The following shall indicate MINIMUM requirements including all genuine parts, accessories, equipment and safety features considered standard, whether mentioned herein or not. The splash guard shall comply with all current applicable Federal Safety standards and OSHA requirements.

Unless otherwise specified, each unit shall include all specified parts, made available for the indicated model by the equipment manufacturer. Specified items not available through the equipment manufacturer shall conform to the best quality standards known to that particular industry.

SPECIFICATIONS:

Shall be manufactured of oil and salt resisting, molded natural or synthetic rubber. Shall be reinforced with nylon or cotton cord.

The body of the splash guard shall be a minimum of .09375 in. The trim area shall be 3/8 in. minimum thickness. The body area within the outside dimensions of 24"W by 36" H, tolerances +/- .250 in. The weight of the splash guard shall be 7.5 lbs., minimum.

NOTE: All dimensions having +/- tolerance shall be within that tolerance range. All dimensions that are stated as a minimum are that, but the minimum may be exceeded.

Unacceptable: Painted surface, anti-sail type splash guard.

REFERENCE: TW 823-5093