



Electrical Permissibility Checklist  
No. DE-0021

If an MSHA permissible plate has been affixed to this machine, it must meet the requirements of Part 36, Title 30, Code of Federal Regulations. It is the responsibility of the user to insure that this machine is maintained in permissible condition in accordance with this checklist.

Part 36 Matching Approval Nos. 31-87-0, 31-93-0, 31-96-0, 31-113-0, -1, 31-114-0

ALL INSPECTIONS AND TESTS SHALL BE PERFORMED IN FRESH AIR.

A. All electrical enclosures must meet the following:

- (Weekly) 1. ( ) All electrical enclosures have an MSHA plate attached that is clearly stamped with an MSHA certification number (X-P number). These numbers agree with those listed in Table 1.
- (Weekly) 2. ( ) Use feeler gauges of the appropriate size to insure the clearances between the enclosures listed in Table 1 and their corresponding covers are not exceeded.

Table 1

Component Layout Drawing - Page 8

<u>Item</u>	<u>Enclosure</u>	<u>X/P Number</u>	<u>Max. Allowable Clearance (IN.)</u>
1	Alternator	X/P 1622-4	.006
3	Switch	X/P 2166-0	.003
4	Headlight	X/P 1468-31	N/A
		X/P 1468-30 (Alternate)	

- (Weekly) 3. ( ) All electrical enclosures are intact (not cracked or broken); the headlight lenses are not loose.
- "4. ( ) All joints forming the flame arresting paths (flanges and covers) are smooth and free from rust, corrosion, and pitting.

(Weekly)- Designates those inspection checks that must be performed during the weekly maintenance examination in accordance with 30 CFR Section 75.1914

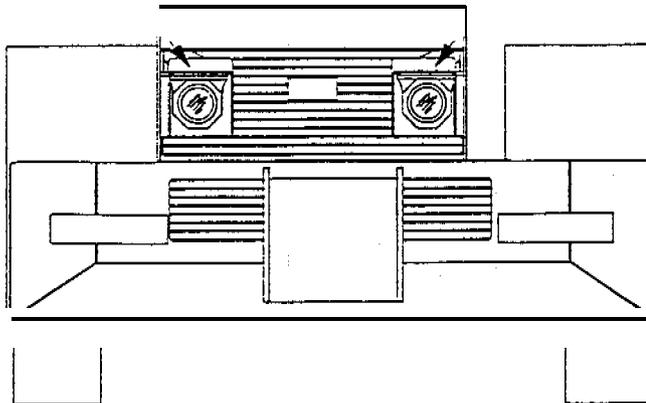
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## B. Electrical Cables

1. ( ) All cables are 16-3SJ0, 0.39 ± 0,03 O.D., Rated 300 V., 12 A., 60-C.
- (Weekly) 2. ( ) All cables are enclosed in hose conduit and securely clamped at both ends and marked "flame-resistant", US MSHA, US MESA, or US BM 2G- (11 C/I).
- (Weekly) 3. ( ) All cables are to be clamped in place to prevent undue movement.
- (Weekly) 4. ( ) All cables are to be isolated from hydraulic and fuel lines.
- (Weekly) 5. ( ) Hose conduit is securely clamped and not subjected to sharp corners or edges.

## C. Headlights

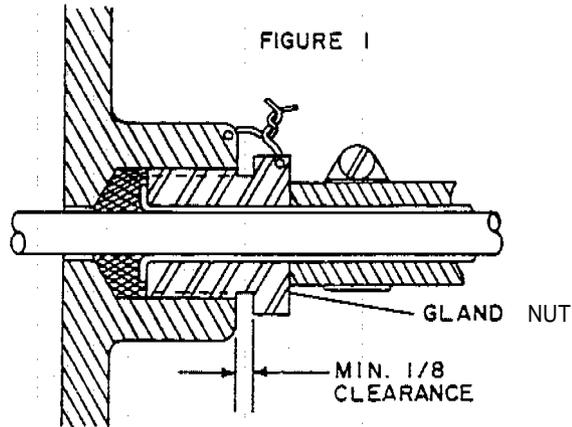
- (Weekly) 1. ( ) Headlights are protected within the machine frame and/or installed in protective guards.
- (Weekly) 2. ( ) Lenses are not cracked, broken, or loose.
- (Weekly) 3. ( ) Headlight cover is properly installed with all bolts and lockwashers in place and tight.



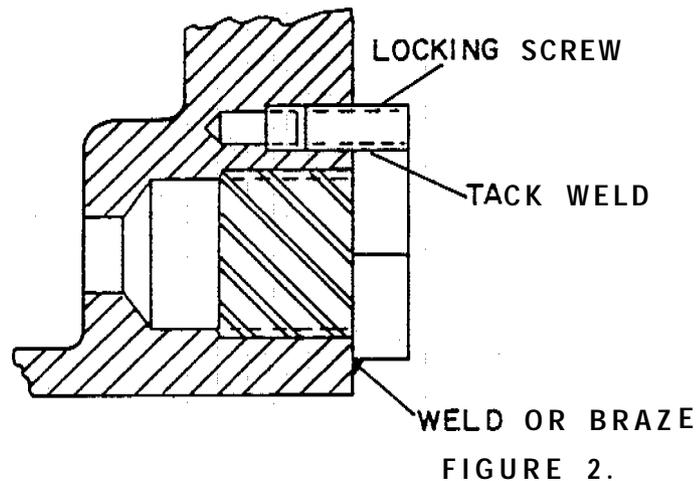
(Weekly)- Designates those inspection checks that must be performed during the weekly maintenance examination in accordance with 30 CFR, Section 75.1914

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- (Weekly) 4. ( ) All lead connections (packing glands) are assembled so that the cable jacket penetrates into the enclosure and when tightened, a ' 1/8" minimum clearance remains between the packing nut and stuffing box and are lockwired in place, (Figure 1)



- (Weekly) 5. ( ) All unused connections are closed with metal plugs which are secured in place by spot welding, brazing, or equivalent.



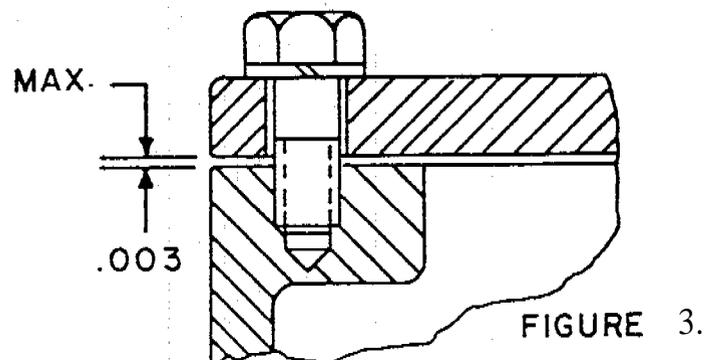
(Weekly)- Designates those inspection checks that must be performed during the weekly maintenance examination in accordance with 30 CFR, Section 75.1914

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- (Weekly) 6 . ( ) None of the fastenings used for joints on the explosion-proof enclosures are used for attaching non-essential parts or for making electrical connections.

#### D. Headlight Switch

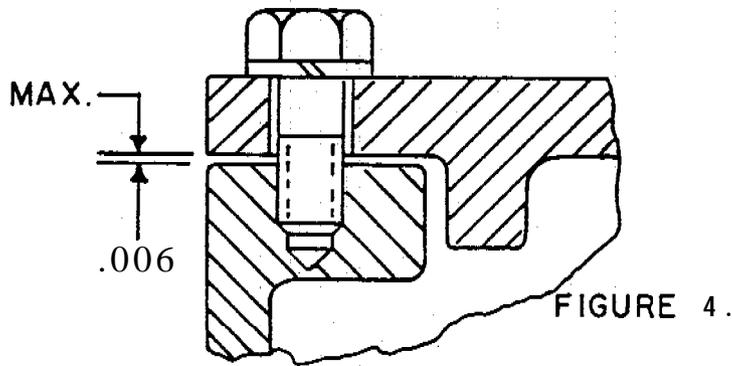
- (Weekly) 1. ( ) Headlight switch is securely in place.
- (Weekly) 2. ( ) The headlight switch must operate properly. Verify by starting the engine, operating the switch and ascertaining its operation - turns the front and rear headlights on and off. The switch must not control or operate any electrical circuits other than the headlights.
- (Weekly) 3. ( ) All lead connections (packing glands) are assembled so that the cable jacket penetrates into the enclosure and when tightened, a 1/8" minimum clearance remains between the packing nut and stuffing box and are lockwired in place. (Figure 1)
- (Weekly) 4. ( ) All unused connections are closed with metal plugs which are secured in place by spot welding, brazing, or equivalent. (Figure 2)
- (Weekly) 5. ( ) Switch cover is properly installed with all bolts and lockwashers in place and tight (Figure 3)



(Weekly) -Designates those inspection checks that must be performed during the weekly maintenance examination in accordance with 30 CFR, section 75.1914

E. Alternator

- (Weekly) 1 . ( ) "Alternator Housing" is securely in place.
- (Weekly) 2 . ( ) All lead connections packing glands) are assembled so that the cable jacket penetrates into the enclosure and when tightened, a 1/8" minimum clearance remains between the packing nut and stuffing box and are lockwired in place. (Figure 1)
- (Weekly) 3 . ( ) Alternator covers are properly installed with all bolts and lockwashers in place and tight. (Figure 4)



(Weekly)- Designates those inspection checks that must be performed during the weekly maintenance examination in accordance with 30 CFR, Section 75.1914

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F.

Other Electrical Permissibility Checks:

The following checks may be performed when an electrical enclosure has been disassembled for whatever reason, or if there is cause to believe a problem exists within the enclosure.

1. ( ) Electrical connections inside the electrical enclosures are secure (not loose) and are insulated where space is limited. In addition, each headlight unit is electrically “grounded” to the machine frame by a separate conductor in the headlight cable. The ground wires are not broken and are securely attached to each headlight.

To verify, remove the electrical enclosure covers; disconnect the ground wire attached to each headlight; use an ohmmeter or similar device to verify continuity between the ground wire and the frame of the machine for each headlight.

2. ( ) The engine-driven alternator lighting system includes a separate two-pole switch which controls the operation of the headlights. The switch is wired such that all power conductors in the cable(s) supplying electrical energy to the headlights are deenergized when the switch is placed in the “off” position.

To verify, remove the cover from the electrical enclosure housing the headlight switch; remove the two main power wires (from the alternator) from the switch terminals; place the switch operator in the “off” position; use an ohmmeter or similar instrument to verify that the input power wire terminals on the switch are disconnected from all other wires attached to the switch terminals; reconnect the power wires to the switch terminals.

3. ( ) Fuses are installed, in the wiring located inside the alternator housing; for short circuit protection of each power conductor in the lighting system.

To verify, disassemble the alternator enclosure; examine the wiring and each fuse; verify that a fuse, not exceeding 10A, is installed in each power conductor of the alternator cable.

4. ( ) Proper bulbs have been installed in the headlights.

To verify the above, disassemble the headlights; a 12 volt and 35 watt bulb is installed.