Instruction Sheet IPR Heat Shield Service Kit



1171886R2

Kit Contents

| Description | Quantity |
|------------------------|----------|
| Heat Reflective Shield | 1 |
| Dielectric Grease | 1 |
| Cable Lock Strap | 1 |
| Instruction Sheet | 1 |

Procedure

WARNING: To prevent personal injury or death, read all safety instructions in the "Safety Information" section of this manual.

WARNING: To prevent personal injury or death, shift transmission to park or neutral, set parking brake, and block wheels before doing diagnostic or service procedures.

CAUTION: To prevent engine damage, turn ignition switch to OFF before unplugging connectors. Failure to turn ignition switch to OFF will cause a voltage spike and damage to electrical components.

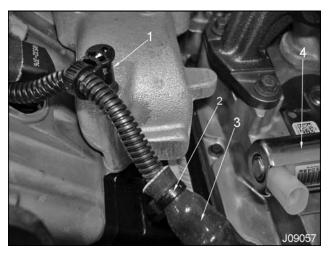


Figure 1 IPR wiring harness

- 1. Cable lock strap
- 2. Plastic tie strip
- 3. Heat reflective shield (rubber coated)
- 4. IPR valve
- Pull the heat reflective shield away from the Injection Pressure Regulator (IPR) valve connector.
- 2. Unlock and disconnect the IPR valve connector.
- 3. Remove the plastic tie strip(s) holding the heat reflective shield on the IPR wiring harness.

NOTE: Before removing the cable lock strap, measure or mark the distance from the connector end to the cable lock strap.

- 4. Remove and discard the cable lock strap, mounted on the intake manifold, from the IPR wiring harness.
- 5. Remove and discard the rubber coated heat reflective shield.

- 6. Inspect the wiring harness connector and the IPR valve terminal connector for rust or oxidation.
 - If any corrosion is found, stop and obtain the IPR Connector Pigtail Kit, and follow those instructions.
 - If no corrosion is found, proceed to Step 7.

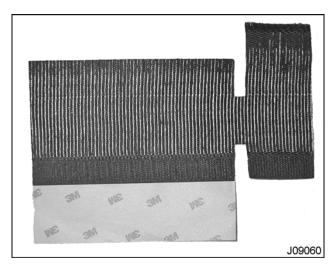


Figure 2 New heat reflective shield

7. Hold the new heat reflective shield as shown in (Figure 3).

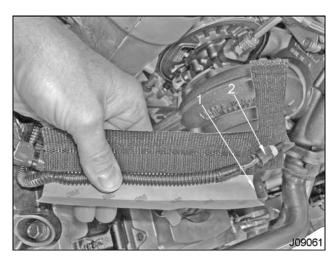


Figure 3 Wiring harness on heat reflective shield

- 1. Right edge of adhesive tab
- 2. IPR connector

8. Lay the IPR wiring harness on the new heat reflective shield with the IPR connector even with the right edge of the adhesive tab.

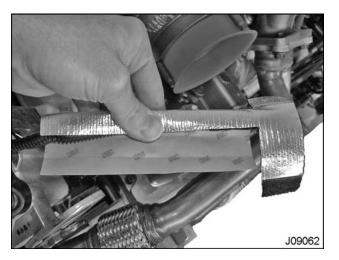


Figure 4 Heat reflective shield over wiring harness

9. Fold the heat reflective shield over the IPR wiring harness.

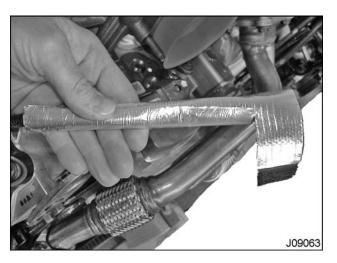


Figure 5 Adhesive backing over heat reflective shield

 Remove the adhesive backing. Wrap the adhesive backed part of the heat reflective shield over the previously folded heat reflective shield.



Figure 6 Cable lock strap (shown out of position)

- 11. Wrap plastic electrical tape around the end of the heat reflective shield and the convoluted tubing. The electrical tape should be on the end of the heat reflective shield away from the connector.
- 12. Fasten the new cable lock strap on the wiring harness, locate the cable lock strap in the same spot it was removed from, see note about measuring before step 4. Refasten the cable lock strap to the locating stud on the intake manifold.

WARNING: To prevent personal injury or possible death, read and adhere to all the guidelines in the Material Safety Data Sheet (MSDS) for dielectric grease located at the end of this document.

13. Apply a small amount of dielectric grease on the IPR wiring harness connector terminals.

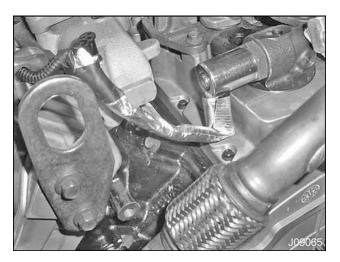


Figure 7 IPR valve connector

CAUTION: To prevent engine damage, the harness connector must be properly seated and the connector latched to avoid poor performance or no-start conditions. Installing connectors at an angle may cause an improper connection and damaged components.

- 14. Connect the IPR wiring harness connector to the IPR valve and latch the connector.
- 15. Insure the IPR valve is oriented with the connector at the 6 o'clock position, see (Figure 7).
- 16. Finish wrapping the "L" part of the heat reflective shield around the IPR connection point.



Material Safety Data Sheet

164 Chandler Street
Buffalo, NY 14207
www.niagaralubricant.com

This MSDS is being provided to your company for the purpose of providing current health and safety information to your management and for your employees who work with this product. Please read the information on these sheets and then provide this information to those people in your company whose responsibility it is to comply with FEDERAL, STATE, AND COMMUNITY RIGHT TO KNOW regulations. Also, make this information available to any employee who requests it.

If Niagara Lubricant Co., Inc. considers the formula of this product to be a trade secret, the exact chemical names of the ingredient(s) and the percentages in which they are combined will not appear in the body of this sheet. The exact composition is available upon request to physicians, industrial hygienists, and other health professionals. For chemical emergencies, spills, leaks, fire, or exposure call CHEMTREK (800) 424-9300.

May be used to comply with OSHA's Hazard Communication Standard 29 CFR 1910.1200. Standard must be consulted for specific requirements.

| | | | | | | HAZARD RATING |
|---------------|---|------|---|------------|---|--|
| ACLITE HEALTH | 1 | FIRE | 1 | DEACTIVITY | 0 | Least - 0 Slight - 1 Moderate - 2 High - 3 |
| ACUTE HEALTH | 1 | FIRE | 1 | REACTIVITY | U | Extreme - 4 |

Section 1: CHEMICAL PRODUCT IDENTIFICATION

PRODUCT: TRUCK-LITE NYK LUBRICANT
CHEMICAL NAME: PETROLEUM HYDROCARBON

SYNONYMS: GREASE NIAGARA CODE: 55126NYK

TRUCK-LITE CODES: 8506; 97903; 97940; 97943; 97944; 97944-1; 98012

| | Section II: COMPOSITION/INFORMATION ON INGREDIENTS | | | | | | | | | | | |
|-----|--|-------------|-----|--|--|--|--|--|--|--|--|--|
| NO. | COMPOSITION | CAS NO. | % | | | | | | | | | |
| Р | TRUCK-LITE NYK LUBRICANT | | 100 | | | | | | | | | |
| 1 | HYDROTREATED RESIDUAL OIL | 64742-57-0 | >50 | | | | | | | | | |
| 2 | HIGHLY REFINED PETROLEUM OIL | 64742-54-7 | >30 | | | | | | | | | |
| 3 | INORGANIC THICKENER | 1302-78-9 | >5 | | | | | | | | | |
| 4 | RHEOLOGICAL ADDITIVE ¹ | PROPRIETARY | <3 | | | | | | | | | |

Additive manufacturer considers this additive package to be CONFIDENTIAL BUSINESS INFORMATION and is being withheld as permitted by 29 CFR 1910.1200.

| Section IIB: ACUTE TOXICITY DATA | | | | | | | | | | |
|----------------------------------|------------|--------------|------------------|--|--|--|--|--|--|--|
| NO. | ACUTE ORAL | ACUTE DERMAL | ACUTE INHALATION | | | | | | | |
| | N.D. | N.D. | N.D. | | | | | | | |



Material Safety Data Sheet

International Truck and Engine

Corporation

4201 Winfield Road

Warrenville, IL. 60555 USA

Part No. TL97943

| | | Se | ection | III: HEAL | TH INFORM | MATION | | | | | | |
|-----------------|---------------------|---|--------|-----------|-----------|---------------------------|---|------|---|--|--|--|
| | EFFECTS OF EXPOSURE | | | | | | | | | | | |
| OSHA PEL/TWA | N.E. | OSHA N.E. ACGIH N.E. ACGIH TLV/TWA TLV/STEL O | | | | | | | | | | |
| IRRITATION | | SKIN | Х | SEVERE | | MODERATE | | MILD | Х | | | |
| | | EYE | Х | SEVERE | | MODERATE | | MILD | Х | | | |
| CORROSIVITY | | SKIN | Х | | | | | | | | | |
| | | EYE | X | | | MAY CAUSE BLINDNESS | | | | | | |
| | | | | | | NOT CORROSIVE | Х | | | | | |

| | | Secti | ion IV | : EMERGENCY FI | RST A | AID. | | |
|--|---|---|--------|---|-------|----------------------------------|---|-------|
| INGESTION | | | | | | | | |
| INDUCE VOMITING | | DO NOT INDUCE VOMITING | Х | GIVE PLENTY OF WATER | | GET MEDICAL ATTENTION | Х | OTHER |
| DERMAL | | | | | | | | |
| FLUSH WITH SOAP AND WATER | X | GET MEDICAL ATTENTION | X | CONTAMINATED CLOTHING - REMOVE AND LAUNDER | X | CONTAMINATED SHOES DESTROY | | OTHER |
| EYE CONTACT | | | | | | | | |
| FLUSH WITH PLENTY OF WATER AT LEAST 15 MINUTES | X | GET MEDICAL ATTENTION | Х | | | | | OTHER |
| INHALATION | | | | | | | | |
| REMOVE TO FRESH AIR | X | IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION | | GIVE OXYGEN | | GET MEDICAL ATTENTION | Х | OTHER |

 $\mbox{N.D.}$ - NOT DETERMINED N.A. - NOT APPLICABLE < - LESS THAN > - GREATER THAN N.E. - NOT ESTABLISHED N.R. - NOT REVIEWED

| | Section V: PHYSICAL DATA | | | | | | | | | | | |
|--|--------------------------|-------------------------|---|--------------------|--------|--------------------------|--|-------------------------------|------|--|--|--|
| BOILING POINT (°F) | >700 | MELTING N.A. POINT (°F) | | POUR POINT (°F) | -60 | -60 DROPPING POINT °F | | VAPOR DENSITY (AIR = 1) | <.01 | | | |
| SPECIFIC GRAVITY (H20 = 1) | .90 | SOLUBILITY IN WATER | ١ | NEGLIGIBLE | ОТН | ER | | VAPOR PRESSURE (mm hg) | | | | |
| EVAPORATION RATE (N - BUTYL ACETATE = 1) | <.001 | APPEARANCE ODOR | & | PALE LIQUID, | N ODOR | | | | | | | |

| | | | Sec | tion | VI: FIF | RE AI | ND EXPLOSIO | N HA | ZAR | DS | | | | |
|-------------------|------|------------------|-------------------|----------|-----------------|-------|---------------------|--|------------|---------------|---------------------|------|---|---|
| FLASH POINT (°F) | Т | | | D. UPPER | N.D. | | | AUTO-IGNITION TEMPERATURE/I POINT (°F) | | | N.A. RE | | | |
| EXTINGUISH | ING | MEDI | A | | | | | | | | | | | |
| WATER SPRAY | ٧ | VATER | FOG | | CO2 | Х | DRY CHEMICAL | Х | ALC FOA | OHOL | | FOAI | M | Х |
| EARTH AND SAND | | | | | | | | | | | | | | |
| SPECIAL FIR | E FI | GHTIN | NG PRO | CED | URES | | | | | | | | | |
| DO NOT ENT | ER | R BUILDING ALLOW | | | OW FIRE TO BURN | | | WATER MAY CAUSE FROTHING | | | DO NOT USE WATER | | | |
| - | | | | ; | Section | VII: | REACTIVITY I | DATA | \ | | | | | |
| STABILITY | | | | | | | HAZARDOUS | S PO | LYME | RIZATI | ON | | | |
| STABLE | | Х | UNSTA | ABLE | | | WILL OCCUP | ₹ | | WILL I | | Х | | |
| INCOMPATIB | ILIT | Y - AV | OID CO | NTA | CT WIT | Ή | | | | | | | | |
| STRONG ACI | IDS | | STRONG ALKALIS | | | | STRONG OXIDIZERS | | | OTHER | | | | |
| CONDITIONS | то | AVOI | D | | | | | | | | | | | |
| HEAT | | Х | OPEN | FLAI | MES | Х | SPARKS | | | IGNIT SOUR | | | | |

Section VIII: EMPLOYEE PROTECTION

RESPIRATORY PROTECTION: IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS, USE A NIOSH APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE, IN ACCORD WITH 29 CFR 1910.134 USE EITHER AN ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS.

PROTECTIVE CLOTHING: WEAR CHEMICAL RESISTANT GLOVES AND OTHER PROTECTIVE CLOTHING AS REQUIRED MINIMIZING SKIN CONTACT, WEAR SAFETY GOGGLES TO AVOID EYE CONTACT.

Section X: ENVIRONMENTAL PROTECTION

SPILL OR LEAK PROCEDURES: USE JUDGEMENT WHEN CLEANING LARGE SPILLS, SHUT OFF SOURCE OF LEAK, DIKE AND CONTAIN. SOAK UP WITH AN ABSORBENT SUCH AS CLAY, SAND, OR OTHER SUITABLE MATERIALS, DISPOSE OF PROPERLY.

Section XI: SPECIAL PRECAUTIONS

MINIMIZE SKIN CONTACT. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING, OR USING TOILET FACILITIES. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE. STORE IN A COOL, DRY PLACE WITH ADEQUATE VENTILATION, KEEP AWAY FROM OPEN FLAMES AND HIGH TEMPERATURE.

Section XII: TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION

NOT REGULATED

Niagara Lubricant Co., Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgement in determining its appropriateness for a particular purpose. Niagara Lubricant Co., Inc. makes no representations or warranties, either expressed or

implied, of merchantability, fitness for a particular purpose with respect to the information set forth herein or to the product to which the information refers. Accordingly, Niagara Lubricant Co., Inc. will not be responsible for damages resulting from use of or reliance upon this information.

DATE PREPARED: 24 March 2004