

PARTS LIST

PRODUCT: MODEL 02-2546-0100 - 25 TON JACK
(SERIAL #8801-9234 AND ABOVE)

DATE: 07/09/90

<u>ITEM</u>	<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>
1	K-1066	1	Jack Weldment; when ordering state color. Factory to determine proper assembly
2	H-1045	1	Breather, 1/2"
3	K-1061-01	1	Reservoir Kit (Includes (1) Item #2, #5 & #18 and (3) Items #4 (plus labels)
4	G-1202-1050	3	1/4-20 Elastic Stopnuts, Plated
5	TF-1047-01*05.5	1	Push-On-Hose, 1/4" Dia. x 5-1/2" lg.
6	N-2009-08-S	1	Fitting, Cylinder
7	G-1100-107010	2	3/8-16 x 1" lg. Hex Hd. Bolt, Grade 5, Plated
8	G-1251-1070R	2	3/8 Lockwasher, Plated
9	TF-1043-03*09.4	1	Hose Assembly
10	K-1062	3	Caster Kit (Includes (4) Items #11 & #12)
11	G-1202-1055	12	1/4-28 Elastic Stopnut, Plated
12	G-1100-105506	12	1/4-28 x 3/4" lg. Hex Hd. Bolt, Grade 5, Plated
13	K-1063	3	Caster Bracket Kit (Includes (1) Item #16
14	K-1065-02	3	Spring Kit (Includes (1) Item #16
15	N-2005-10-S	1	Fitting, Pump
16	G-1300-25120	3	Roll Pin, 1/4" Dia. x 1-1/4" lg.
17	K-1901-02	1	Pump (Includes (1) Item #15 & #18)

TRONAIR

AIRCRAFT GROUND SUPPORT EQUIPMENT

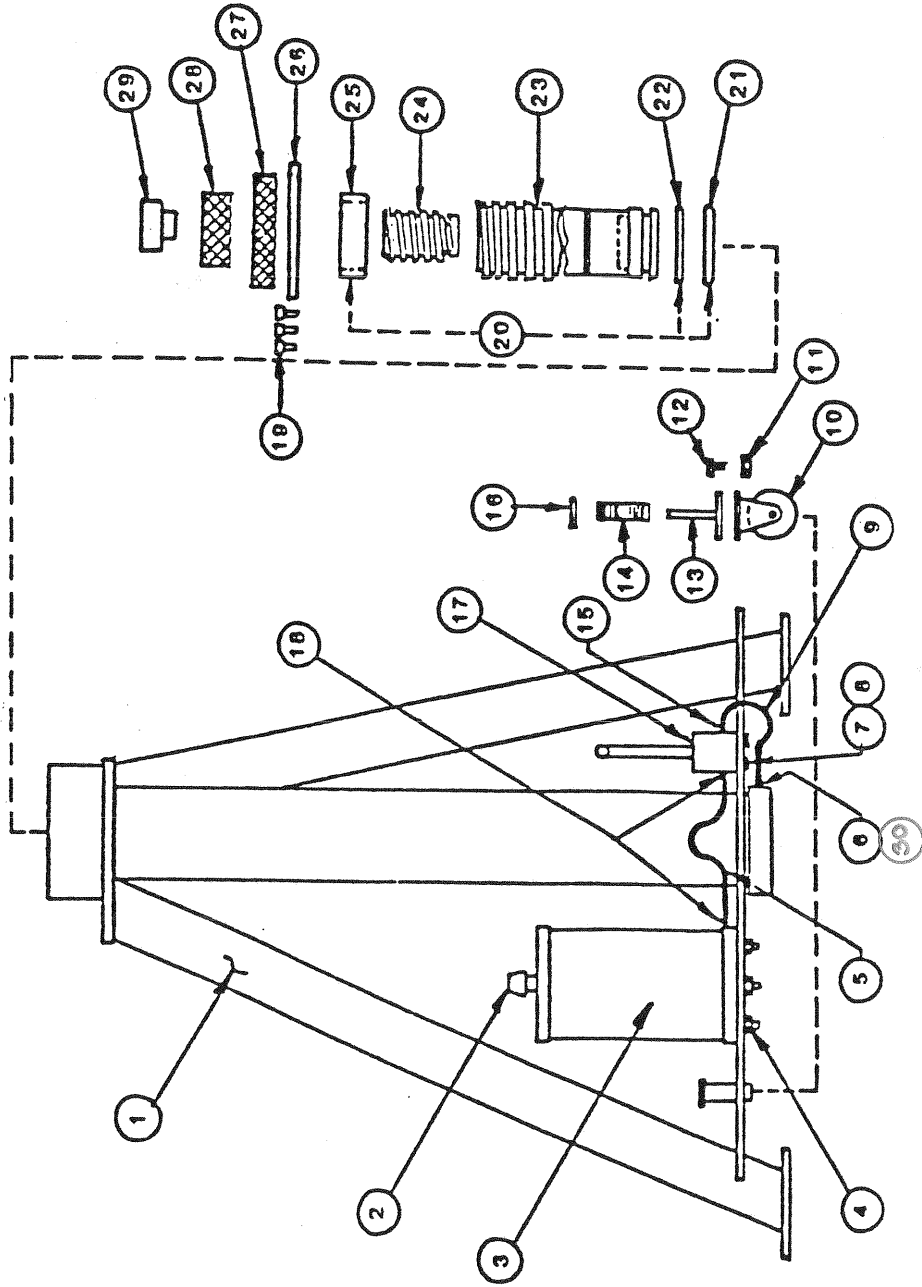
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(419) 866-6301 • TWX 810-440-2839

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<u>ITEM</u>	<u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>
18	N-2410-01	2	Fitting, Reservoir & Pump (Imperial)
19	G-1151-107210	3	3/8-16 x 1" lg. Allen Hd. Cap Screw
20	K-1051	2	Ram Seal Kit (Includes (1) Item #21, #22 & #25)
21 *	HC-2000-346	1	O-Ring (Parker)
22 *	HC-2020-346	1	Back-Up Ring
23	Z-1611	1	Ram Assembly (Includes (1) Item #21 & #22)
24	R-1150	1	Center Extension
25	HJ-706	1	Guide Ring
26	HJ-707	1	Mounting Plate
27	G-1206	1	Ram Nut
28	TR-1176	1	Extension Nut
29	HJ-557	1	Jack Pad
30	N-2250-06	1	Expanding Pipe Adapter

* THESE ITEMS CAN ONLY BE PURCHASED AS PART OF ITEMS #20 OR #23.

ORDERING: WHEN ORDERING SPARE PARTS OR REPLACEMENT PARTS, PLEASE CALL OUT ITEM NUMBER, PART NUMBER, NOMENCALTURE, EQUIPMENT MODEL NUMBER, SERIAL NUMBER (IF AVAILABLE), AND PARTS LIST DATE.



PARTS LIST

PRODUCT:

HC-1039
HYDRAULIC HAND PUMP

DATE:

9-20-84

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>PURCHASE PART NUMBER</u>	<u>QTY</u>		
4*	RELEASE BALL				
21	SPRING - OUTPUT CHECK				
22	BALL - OUTPUT CHECK				
23	BALL - INLET CHECK	-(KIT) K-1069	1		
24	SPRING - INLET CHECK				
25	PLUG			505-000	1
6*	'O' RING - RELEASE SCREW (2-206)				
26	'O' RING - OUTPUT CHECK (2-111)				
27	'O' RING - INLET CHECK (2-008)				
28	'O' RING - VALVE BODY (2-022)	-(KIT) K-1001	1		
29	'O' RING - TUBE SEAL (2-125)				
30	'O' RING - PISTON SEAL (2-206)				
31	BACK-UP RING				
32	'O' RING - GUIDE SHOE (2-111)				
33	BUSHING (3/8 x 1/8 NPT)			555-000	1
34	ROD WIPER	528-060	1		
35	PISTON GUIDE SHOE	527-060	1		

NOTE: (1) THOSE ITEMS DESIGNATED AS KITS
CONTAIN ALL HARDWARE NECESSARY
FOR INSTALLATION.

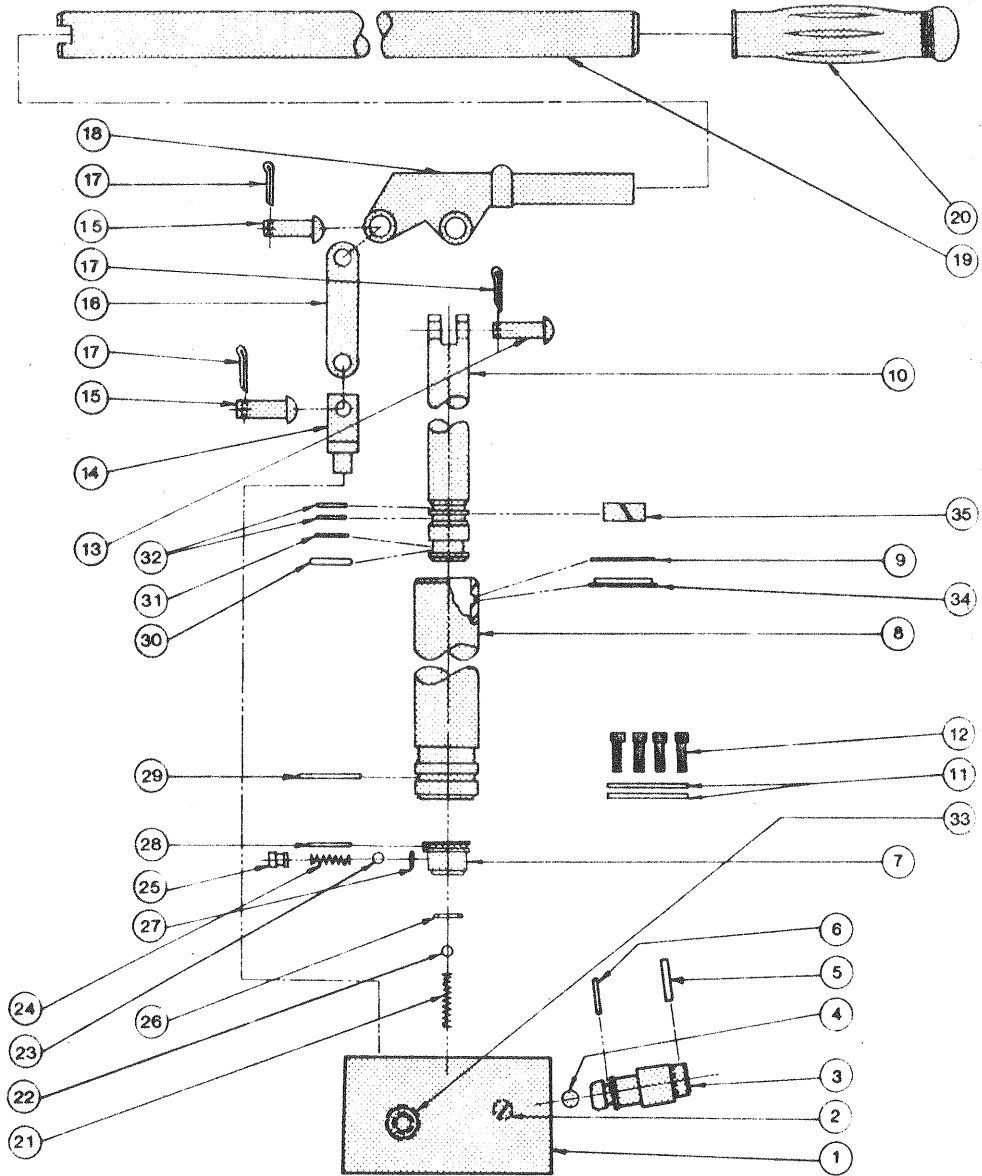
(2) UNLESS OTHERWISE LISTED, ALL
REPLACEMENT BOLTS SHOULD BE
GRADE 5 OR BETTER.

* ITEMS THAT ARE IN MORE THAN ONE KIT

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AIRCRAFT GROUND SUPPORT EQUIPMENT

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SAFETY CONSIDERATIONSALWAYS

Use the correct height and capacity jack. As a guide, a correct height jack will allow contact with the aircraft pad by raising the mechanical extension only.

- a) Place jack on hard, level surface
- b) Use sufficient personnel for safe jacking
- c) Raise and lower jacks simultaneously keeping aircraft level at all times
- d) Lower ram locking nut as aircraft is raised. Position nut against mounting plate after jacking
- e) Use proper tail or nose stand for safety and stability

NEVER

- a) Place fingers or hands between aircraft and jack pad
- b) Attempt to exceed the capacity of the jack

NOTE

Due to the external ram threads on aircraft jacks, it is not possible to effectively seal the cylinder bore from the environment. Intrusion of moisture, dirt, chemicals, or other contaminants can cause damage to the internal metal and seal components. Therefore, it is good practice to cover the jack with plastic if the unit may be exposed to such an environment during storage, aircraft washing, etc.

OPERATIONTO RAISE AIRCRAFT

- a) Close pump release valve
- b) Raise mechanical extension as close to aircraft jack pad as possible
- c) Operate pump to raise jack ram and aircraft
- d) Lower ram locking nut as aircraft is raised. Position nut against mounting plate after jacking

TO LOWER AIRCRAFT

- a) If ram locking nut is tight, raise ram slightly and spin nut free
- b) SLOWLY open pump release valve
- c) As ram lowers, continue turning locking nut
- d) After jack pad clears aircraft, lower center extension before moving jack

CAUTION

WHEN AN AIRCRAFT IS LOWERED AFTER JACKING, THE STATIC FRICTION OF THE STRUT SEALS MAY NOT ALLOW THE AIRCRAFT TO RETURN TO A NORMAL HEIGHT. ALWAYS LOWER THE JACK RAM AND CENTER EXTENSION TO A MINIMUM POSITION BEFORE MOVING THE JACK. FAILURE TO DO SO MAY CAUSE DAMAGE TO THE AIRCRAFT OR PERSONAL INJURY DUE TO A SUDDEN SETTLING OF THE AIRCRAFT STRUT.

MAINTENANCEALWAYS

- a) Protect jack from exposure to moisture and contamination
- b) Inspect hydraulic ram and mechanical extension periodically for corrosion and dirt intrusion. If little or no evidence of contamination exists, wipe ram clean and apply a moisture displacing lubricant similar to MIL SPEC VV-L-800A

If corrosion or severe contamination exists, remove ram, drain oil, and inspect cylinder bore. Rehone cylinder if necessary, clean components, and reseal ram. Apply MIL-SPEC VV-L-800A or equivalent lubricant to ram and cylinder bore.
- c) Add clean hydraulic fluid (MIL-H-5606) as required.

SERVICINGPUMP

The pump should be disassembled and inspected whenever leakage or malfunctioning occurs. Refer to illustration parts list for guidance. Always use new seals when reassembling pump.

CYLINDER/RAM

Remove ram when contamination, corrosion, or malfunctioning occur during ram operation. Refer to illustrated parts list for guidance. Always install new seals when installing ram.

RAM REMOVAL

- a) Remove mechanical extension
- b) Remove socket head cap screws and mounting plate
- c) Raise ram with pump until end of threads are visible and remove.
- d) Lightly hone cylinder if necessary to remove any corrosion.

SERVICINGRAM INSTALLATION

- a) With pump release valve closed, pour clean oil into cylinder bore until level with lower counterbore step.
- b) Install ram at top of cylinder, open pump release screw, and push ram into cylinder.
- c) Install guide ring, mounting plate, socket head screws, and center extension.



***** I. PRODUCT IDENTIFICATION *****

MOBIL AERO HFA

SUPPLIER:

MOBIL OIL CORP.

HEALTH EMERGENCY TELEPHONE:

(212) 883-4411

CHEMICAL NAMES AND SYNONYMS:

PET. HYDROCARBONS AND ADDITIVES

TRANSPORT EMERGENCY TELEPHONE:

(800) 424-9300 (CHEMTREC)

USE OR DESCRIPTION:

AVIATION HYDRAULIC FLUID

***** II. TYPICAL CHEMICAL AND PHYSICAL PROPERTIES *****

APPEARANCE: RED LIQUID

ODOR: MILD

PH: NA

VISCOSITY AT 100 F, SUS: 78.8 AT 40 C, CS: 14.4

VISCOSITY AT 210 F, SUS: 45.0 AT 100 C, CS: 5.6

FLASH POINT F(C): 205(96) (ASTM D-92)

MELTING POINT F(C): NA

POUR POINT F(C): -75(-59)

BOILING POINT F(C): > 450(232)

RELATIVE DENSITY, 15/4 C: 0.876

SOLUBILITY IN WATER: NEGLIGIBLE

VAPOR PRESSURE-MM HG 20C: < 1.0

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES

FOR FURTHER INFORMATION, CONTACT YOUR LOCAL MARKETING OFFICE.

***** III. INGREDIENTS *****

WT PCT (APPROX)	EXPOSURE LIMITS MG/M3 PPM	SOURCES (AND NOTES)
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HAZARDOUS INGREDIENTS:

CONVENT. REFINED MINERAL OILS	85	
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OTHER INGREDIENTS:

ADDITIVES AND/OR OTHER INGREDIENTS	<15	
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KEY TO SOURCES: A=ACGIH-TLV, A*=SUGGESTED-TLV, M=MOBIL, O=OSHA

NOTE: LIMITS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.

***** IV. HEALTH HAZARD DATA *****

EFFECTS OF OVEREXPOSURE:

****NOTE: THIS PRODUCT CONTAINS CONVENTIONALLY REFINED MINERAL OILS WHICH MAY CONTAIN TRACE QUANTITIES OF POLYCYCLIC AROMATIC HYDROCARBONS (PCAH). UNDER CONDITIONS OF POOR PERSONAL HYGIENE AND PROLONGED, REPEATED CONTACTS, SOME PCAH HAVE BEEN SUSPECTED AS A CAUSE OF SKIN CANCER IN HUMANS. SLIGHT EYE IRRITATION. MODERATE SKIN IRRITATION.

***** V. EMERGENCY AND FIRST AID PROCEDURES *****

EYE CONTACT: FLUSH WITH WATER.

SKIN CONTACT: WASH CONTACT AREAS WITH SOAP AND WATER. LAUNDRY CONTAMINATED CLOTHING BEFORE REUSE.

INHALATION: NOT EXPECTED TO BE A PROBLEM.

INGESTION: DO NOT INDUCE VOMITING. ADMINISTER VEGETABLE OIL. GET MEDICAL ASSISTANCE. (NOTE TO PHYSICIAN: MATERIAL IF ASPIRATED INTO THE LUNGS MAY CAUSE CHEMICAL PNEUMONITIS. TREAT APPROPRIATELY)

*****Mobil******* VI. FIRE AND EXPLOSION HAZARD DATA *****
FLASH POINT F(C): 205(96) (ASTM D-92)
FLAMMABLE LIMITS. LEL: .6 UEL: 7.0
EXTINGUISHING MEDIA: CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.
SPECIAL FIRE FIGHTING PROCEDURES: FIREFIGHTERS MUST USE SELF-CONTAINED
BREATHING APPARATUS.
UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE

***** VII. REACTIVITY DATA *****
STABILITY (THERMAL, LIGHT, ETC.): STABLE
CONDITIONS TO AVOID: HEAT, SPARKS, FLAME AND BUILD UP OF STATIC
ELECTRICITY.
INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZERS
HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE.
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

***** VIII. SPILL OR LEAK PROCEDURE *****
ENVIRONMENTAL IMPACT: REPORT SPILLS AS REQUIRED TO APPROPRIATE
AUTHORITIES. U. S. COAST GUARD REGULATIONS REQUIRE IMMEDIATE
REPORTING OF SPILLS THAT COULD REACH ANY WATERWAY INCLUDING
INTERMITTENT DRY CREEKS. REPORT SPILL TO COAST GUARD TOLL FREE
NUMBER 800-424-3802.
PROCEDURES IF MATERIAL IS RELEASED OR SPILLED: ADSORB ON FIRE RETARDANT
TREATED SAWDUST, DIATOMACEOUS EARTH, ETC. SHOVEL UP AND DISPOSE OF
AT AN APPROPRIATE WASTE DISPOSAL FACILITY IN ACCORDANCE WITH
CURRENT APPLICABLE LAWS AND REGULATIONS, AND PRODUCT
CHARACTERISTICS AT TIME OF DISPOSAL.
WASTE MANAGEMENT: DISSOLVE WASTE IN A SOLVENT AND DISPOSE BY SUPERVISED
INCINERATION IN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS.

***** IX. SPECIAL PROTECTION INFORMATION *****
EYE PROTECTION: NORMAL INDUSTRIAL EYE PROTECTION PRACTICES SHOULD BE
EMPLOYED.
SKIN PROTECTION: IF PROLONGED OR REPEATED SKIN CONTACT IS LIKELY, OIL
IMPERVIOUS GLOVES SHOULD BE WORN. GOOD PERSONAL HYGIENE PRACTICES
SHOULD ALWAYS BE FOLLOWED.
RESPIRATORY PROTECTION: NO SPECIAL REQUIREMENTS UNDER ORDINARY
CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.
VENTILATION: NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE
AND WITH ADEQUATE VENTILATION. USE IN WELL VENTILATED AREA AWAY
FROM ALL IGNITION SOURCES.

***** X. SPECIAL PRECAUTIONS *****
HANDLING: AVOID CONTACT WITH SKIN.
STORAGE: SEE APPENDIX FOR PRECAUTIONARY LABEL. L230

Mobil** XI. TOXICOLOGICAL DATA *****

---ACUTE---

ORAL TOXICITY (RATS): LD50: > 5 G/KG SLIGHTLY TOXIC(ESTIMATED)
---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.
DERMAL TOXICITY (RABBITS): LD50: > 2 G/KG SLIGHTLY TOXIC(ESTIMATED)
---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.
INHALATION TOXICITY (RATS): NOT APPLICABLE ---HARMFUL CONCENTRATIONS OF
MISTS AND/OR VAPORS ARE UNLIKELY TO BE ENCOUNTERED THROUGH ANY
CUSTOMARY OR REASONABLY FORESEEABLE HANDLING, USE, OR MISUSE OF
THIS PRODUCT.
EYE IRRITATION (RABBITS): MAY CAUSE SLIGHT IRRITATION. EYE IRRITATION
SCORES: 3.7 AT 24 HOURS, 3.0 AT 48 HOURS, 0.2 AT 72 HOURS---BASED
ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.
SKIN IRRITATION (RABBITS): MAY CAUSE MODERATE IRRITATION ON PROLONGED
OR REPEATED CONTACT. PRIMARY IRRITATION SCORE: 4.5/8---BASED ON
TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

***** XII. REGULATORY INFORMATION *****

TSCA INVENTORY STATUS: ALL COMPONENTS ARE REGISTERED.
EINECS INVENTORY STATUS: ALL COMPONENTS ARE REGISTERED.
THE FOLLOWING PRODUCT INGREDIENTS ARE CITED ON THE LISTS BELOW:

CHEMICAL NAME CAS NUMBER LIST CITATIONS

*** NO INGREDIENT CITATIONS ***

--- KEY TO LIST CITATIONS ---

- 1 = OSHA, 2 = ACGIH, 3 = IARC, 4 = NTP, 5 = NCI,
6 = EPA CARC, 7 = NFPA 49, 8 = NFPA 325M, 9 = DOT HMT, 10 = CA RTK,
11 = IL RTK, 12 = MA RTK, 13 = MN RTK, 14 = NJ RTK, 15 = NJ SHH,
16 = FL RTK, 17 = PA RTK.

FOR MOBIL USE ONLY: (FILL NO: RM241150) MHC: 1* 1* NA 1* 2* PPEC:
US82-084 APPROVE REVISED: 11/22/82

PREPARED BY: MOBIL OIL CORPORATION
ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPARTMENT, PRINCETON, NJ
FOR FURTHER INFORMATION, CONTACT:
MOBIL OIL CORPORATION, PRODUCT FORMULATION AND QUALITY CONTROL
3225 GALLOWS ROAD, FAIRFAX, VA 22037 (703) 849-3265

INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT
WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR
PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT
ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL
WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE
USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A
RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING
LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING
PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.

*****Mobil******* APPENDIX *****

PRECAUTIONARY LABEL TEXT FOR PACKAGED PRODUCTS:

CONTAINS CONVENTIONALLY REFINED MINERAL OIL

CAUTION.

MAY CAUSE IRRITATION OR MORE SERIOUS SKIN
DISORDERS ON PROLONGED, REPEATED SKIN CONTACT.

AVOID CONTACT WITH SKIN.
CLOTHING WET WITH THIS PRODUCT SHOULD BE REMOVED.

FIRST AID: IN CASE OF SKIN CONTACT, THOROUGHLY WASH AREA
WITH SOAP AND WATER.
REMOVE CONTAMINATED CLOTHING AND SHOES.

WASH CONTAMINATED CLOTHING BEFORE REUSE.
DISCARD SHOES IF MATERIAL HAS PENETRATED TO INSIDE SURFACE.

FOR INDUSTRIAL USE ONLY.

KEEP OUT OF REACH OF CHILDREN.

NOT INTENDED OR SUITABLE FOR USE IN OR
AROUND A HOUSEHOLD OR DWELLING.

REFER TO PRODUCT MATERIAL SAFETY DATA BULLETIN
FOR FURTHER SAFETY AND HEALTH INFORMATION.

MOBIL OIL CORPORATION, NEW YORK, N.Y. L-230 (1/80)