

Seven Easy Steps for Selecting the Proper Hose

An effective way to remember hose selection criteria is to remember the word...

STAMPED

- S = Size
- T = Temperature
- A = Application
- M = Material to be conveyed
- P = Pressure
- E = Ends or couplings
- **D** = Delivery (volume and velocity)

1. Hose Size (Dash Numbers)

The inside diameter of the hose must be adequate to keep pressure loss to a minimum and avoid damage to the hose due to heat generation or excessive turbulence. See hose sizing Nomographic Chart.

To determine the replacement hose size, read the layline printed on the side of the original hose. If the original hose layline is painted over or worn off, the original hose must be cut and the inside diameter measured for size.

NOTE: Before cutting an original hose assembly, measure the overall assembly length and fitting orientation. These measurements will be required to build the replacement assembly.

The hydraulics industry has adopted a measuring system called Dash Numbers to indicate hose and coupling size. The number which precedes the hose or coupling description is the dash size (see table). This industry standard number denotes hose I.D. in sixteenths of an inch. (The exception to this is the SAE100R5 hoses C5C, C5D, C5E, C5M as well as, C14 and AC134a, where dash sizes denote hose I.D. equal to equivalent tube O.D.) See chart to the right.

| | Hose I.D. (Inches) | | | | | | | | | |
|----------|--------------------|------------------------------|--------------|----------------------|--|--|--|--|--|--|
| | All Exce C14 a | ept C5 Series, and AC134a | C5 Se and | eries, C14 AC134a | | | | | | |
| Dash No. | Inches | Millimeters | Inches | Millimeters | | | | | | |
| -2 | 1/8 | 3.2 | - | - | | | | | | |
| -3 | 3/16 | 4.8 | - | _ | | | | | | |
| -4 | 1/4 | 6.4 | 3/16 | 4.8 | | | | | | |
| -5 | 5/16 | 7.9 | 1/4 | 6.4 | | | | | | |
| -6 | 3/8 | 9.5 | 5/16 | 7.9 | | | | | | |
| -8 | 1/2 | 12.7 | 13/32 | 10.3 | | | | | | |
| -10 | 5/8 | 15.9 | 1/2 | 12.7 | | | | | | |
| -12 | 3/4 | 19.0 | 5/8 | 15.9 | | | | | | |
| -14 | 7/8 | 22.2 | - | _ | | | | | | |
| -16 | 1 | 25.4 | 7/8 | 22.2 | | | | | | |
| -20 | 1-1/4 | 31.8 | 1-1/8 | 28.6 | | | | | | |
| -24 | 1-1/2 | 38.1 | 1-3/8 | 34.9 | | | | | | |
| -32 | 2 | 50.8 | 1-13/16 | 46.0 | | | | | | |
| -36 | 2-1/4 | 57.6 | - | _ | | | | | | |
| -40 | 2-1/2 | 63.5 | 2-3/8 | 60.3 | | | | | | |
| -48 | 3 | 76.2 | - | - | | | | | | |
| -56 | 3-1/2 | 88.9 | - | - | | | | | | |
| -64 | 4 | 101.6 | - | _ | | | | | | |
| -72 | 4-1/2 | 115.2 | - | - | | | | | | |

| EQUIPMENT |
|---------------------------------|
| SELECTION |
| GLOBALSPIRAL Couplings |
| PCS Couplings |
| GLOBALSPIRAL HIGH PRESSURE |
| STAINLESS |
| PCM |
| MEGACRIMP |
| COUPLINGS STAINLESS |
| STEEL BRAID |
| CRIMP COUPLINGS |
| FIELD ATTACHABLE |
| G1 & G2 Couplings |
| AIR BRAKE Copper |
| |
| HOSE |
| TOOLS |
| COMPRESSION AIR BRAKE |
| AIR BRAKE Hose Assemblies |
| AIR BRAKE For Rubber Hose |
| FIELD |
| C5 COUPLINGS |
| LOCK-ON |
| SINGLE BEAD |
| BARBED STEM |
| C14 COUPLINGS |
| LOW |
| PRESSURE COUPLINGS |
| GLX COUPLINGS |
| POLARSEAL COUPLINGS |
| POLARSEAL II Couplings |
| ASSEMBLY |
| POWER |
| PCTS |
| THERMO- PLASTIC COUPLINGS |
| ADAPTERS |
| ACCESSORIES |
| UUICK DISCONNECT COUPLERS |
| BALL VALVES |
| NI S |



GLOBALSPIRAL COUPLINGS PCS COUPLINGS

GLOBALSPIRAL

HIGH PRESSURE

STEEL

COUPLINGS

STAINLESS

PCM Couplings

MEGACRIMP

COUPLINGS

STAINLESS

POWER CRIMP

STEEL BRAID

COUPLINGS

FIELD ATTACHABLE

COUPLINGS

AIR BRAKE

G1 & G2

COPPER

TUBING

HOSE

TOOLS

HOSE

HOSE

SURELOK

CUTTERS &

COMPRESSION AIR BRAKE

AIR BRAKE

ASSEMBLIES

FOR RUBBER

FIELD Attachable

C5 COUPLINGS

LOCK-ON

HOSE

BEAD BARBED

STEM

LOW PRESSURE

C14 COUPLINGS

COUPLINGS

GLX COUPLINGS

POLARSEAL

COUPLINGS

POLARSEAL II COUPLINGS

ASSEMBLY

POWER STEERING

THERMO-PLASTIC

COUPLINGS

ADAPTERS ACCESSORIES

QUICK DISCONNECT COUPLERS

BALL VALVES

PCTS

FABRICATION

SINGLE

AIR BRAKE

Hose & Coupling Section

Selecting the Proper Hose - con't.

Hose O.D. can be a critical factor when hose routing clamps are used or hoses are routed through bulkheads. Check individual hose specification tables for O.D.'s.

2. Temperature

When selecting a replacement assembly, two areas of temperature must be considered. These are fluid temperature and ambient temperature. The hose selected must be capable of withstanding the minimum and maximum temperature seen by the system. Care must be taken when routing near hot manifolds and in extreme cases a heat shield may be advisable.

See the Gates Hydraulic Hose Selection Guide; Hose Specification Pages; and/or the Additional Temperature Limits for Gates Hydraulic Hoses Chart for temperature ranges and limits for water, water/oil emulsions and water/glycol solutions.

3. Application

Determine where or how the replacement hose or assembly is to be used. Most often only a duplicate of the original hose will have to be made. To fulfill the requirements of the application, additional questions may need to be answered, such as:

- Where Will Hose be Used?
- Fluid and/or Ambient Temperature?
- Hose Construction?
- Equipment Type?
- Fluid Compatibility?
- Thread End Connection Type?
- Working and Surge Pressures?
- Environmental Conditions?
- Permanent or Field Attachable Couplings?
- Suction Application?
- Routing Requirements?
- Thread Type?
- Government and Industry Standards Being Met?
- Unusual Mechanical Loads?
- Minimum Bend Radius?
- Non-Conductive Hose Required?
- Excessive Abrasion?

4. Material to be Conveyed

Some applications require specialized oils or chemicals to be conveyed through the system. Hose selection must ensure compatibility of the hose tube, cover,couplings and O-rings with the fluid used. Additional caution must be exercised in hose selection for gaseous applications such as refrigerants and LPG.

NOTE: All block type couplings contain nitrile O-rings which must be compatible with the fluids being used.

5. Pressure

Most important in the hose selection process is knowing system pressure, including pressure spikes. Published working pressures must be equal to or greater than the system pressure. Pressure spikes greater than the published working pressure will shorten hose life and must be taken into consideration. Gates DOES NOT recommend using hoses on applications having pressure spikes greater than published working pressures of the hose.

6. Ends of Couplings

Identify end connections using Gates coupling templates and measuring tools or Coupling Identification section. Once thread ends have been identified, consult the appropriate section of the catalog for specific part number selection.

7. Delivery (Volume and Velocity)

If the same I.D. of the original hose is used, assume the system is properly sized to efficiently transport fluid. If the system is new or altered, determine the hose I.D. needed to transport required fluid volume flow by using the Nomographic Chart.

C2

C3

States

| EQUIPMENT |
|---------------------------------|
| HOSE/CPLG. Selection |
| GLOBALSPIRAL COUPLINGS |
| |
| GLOBALSPIRAL |
| HIGH PRESSURE COUPLINGS |
| STAINLESS STEEL |
| PCM Couplings |
| MEGACRIMP COUPLINGS |
| Stainless Steel Braid |
| POWER CRIMP COUPLINGS |
| FIELD Attachabi f |
| G1 & G2 COUPLINGS |
| |
| TUBING |
| SURELOK |
| CUTTERS & TOOLS |
| COMPRESSION AIR BRAKE |
| AIR BRAKE Hose Assemblies |
| AIR BRAKE |
| HOSE |
| FIELD ATTACHABLE |
| COUPLINGS |
| LOCK-ON HOSE |
| SINGLE BEAD |
| STEM |
| C14 Couplings |
| LOW PRESSURE |
| COUPLINGS GLX |
| COUPLINGS |
| COUPLINGS |
| POLARSEAL II Couplings |
| ASSEMBLY FABRICATION |
| POWER STEERING |
| PCTS |
| PLASTIC |
| ADAPTERS |
| ACCESSORIES |
| DISCONNECT COUPLERS |
| BALL VALVES |
| KIIS |

Agency Specifications and Hose Selection Guide

INDUSTRY AGENCIES

- ABS American Bureau of Shipping
- AS Australia Standard
- DIN Deutsch Industry Norm, German
- $\ensuremath{\mathsf{DNV}}$ Det Norske Veritas for North Sea Floating Vessels
- EN European Norm/Standard
- **GL** Germanischer Lloyds
- IJS Industrial Jack Specifications
- RCCC Regular Commom Carrier Conference for Fleet Truck and Bus
- SAE Society of Automotive Engineers

Hose & Coupling Section

DOT/FMVSS - U.S. Department of Transportation/

MSHA - U.S. Mine Safety and Health Administration

Federal Motor Vehicle Safety Standard

GOVERNMENT AGENCIES

USCG - U.S. Coast Guard

| | | | | | Meets These | Age | ncy | Specific | cations | | | | |
|-------------------|----------|-------|---------------|------|----------------|-----|-----|----------|-------------------|-----------------------------|------|----------|-------|
| Hose Type | ABS | AS | DIN | DNV | EN | GL | IJS | RCCC | SAE | DOT/ FMVSS | MSHA | USCG | J1942 |
| | | ~ | | 2111 | | | | | 400045 | | | Fuel Oil | Power |
| EFG6K, G6K | X | X | 20023 4SH/4SP | X | EN 856 4SH/4SP | | | | 100R15 | | X | | X |
| EFG5K, G5K | X | X | 20023 4SH/4SP | Х | EN 856 4SH/4SP | | | | 100R13 | | X | | X |
| EFG4K, G4K | X | X | 20023 4SP | | EN 856 4SP | | | | 100R12 | | X | | X |
| EFG3K, G3K | X | | 20023 4SP | | EN 856 4SP | | | | 100R12 | | Х | | X |
| M5K | | X | | | | X | | | | | | | |
| M4K+ | X | X | | | | X | | | 100R19 | | X | | X |
| M4KH | X | | | | | X | | | 100R19 | | Х | | Х |
| G2XH | | | | | | | | | 100R2 Type AT | | Х | | Х |
| G2AT-HMP | | | | | | | | | 100R2 Type AT | | Х | | Х* |
| M2T® | Х | Х | | Х | EN 853 2SN | | | | 100R16 | | Х | | Х |
| M2T® Plus | | | | | EN 853 2SN | | | | 100R16 | | Х | | |
| CM2T | | | | | EN 857 2CS | | | | 100R16 | | Х | | |
| G2 | | Х | 20022 2SN | Х | EN 853 2SN | Х | | | 100R2 Type AT | | Х | | Х |
| G2H | | Х | | Х | EN 853 2SN | | | | 100R2 Type AT | | Х | Х | Х |
| J2AT | | | | | | | Х | | | | Х | | |
| МЗК | Х | Х | | Х | EN 857 | Х | | | 100R17 | | Х | | Х |
| M3K -12, -16 | Х | Х | | Х | EN 857 | Х | | | 100R17, 100R9 | | Х | Х | Х |
| G1 | | Х | 20022 1SN | Х | EN 853 1SN | Х | | | 100R1 Type AT | | Х | | Х |
| G1H | | | | Х | EN 853 1SN | | | | 100R1 Type AT | | Х | Х | |
| MegaTech™ | | | | | | | | | J1402, J1405 | 106-74 (-4 to -10) | | | |
| TR500 | | | | | | | | | J1402 | 106-74 | | | |
| NABT | | | | | | | | | J844 | | | | |
| C5C | | | | | | | | RP305(B) | 100R5 | 106-74 Type All (-4 to -10) | | | |
| C5E | | | | | | | | | J1405 | 106-74 Type Al | | | |
| C5D | | | | | | | | | J1405 | 106-74 Type All | | | |
| C5M | Х | | | | | | | | J30R2, J1527 | | Х | Х | |
| G3H | | | | | EN 854 R3 | | | | 100R3 | | | | |
| GTH. GTHX | | | | | EN 854 B6 | | | | 100B6 | | | | |
| GMV | χ@ | Х | | | | | | | 100R4 | | Х | | Х |
| LOL | | - · · | | | | | | | | | X | | |
| THERMOPLASTIC | | | | | | | | | | | | | |
| TH7 TH7NC*** | | | | | | | | | 100B7 | | | | |
| TH8, TH8NC | | | | | | | | | 100R8 | | | | |
| TH18, TH18NC | ĺ | ĺ | | | | ĺ | | | 100R18 | | | | ĺ |
| C14 | <u> </u> | | | | | | | | 100R14 | | | | |
| REFRIGERANT | | | | | | | | | | | | | |
| PolarSeal® AC134a | | | | | | | | | 151 Type 2 .12064 | | | | |
| POWER STEERING | | | | | <u> </u> | | | | | | | | |
| PS188 | | | | | | | | | 2050 | | | | |
| | | | | | | | | | 2000 | | | | |

* Except 1/4" ** Except 3/8" & 1/2"

." 5" & 1/2" *** TH7NC meets ANSI A92.2 for vehicle mounted aerial devices (-3 to -8) @ to be used with a fire sleeve



GLOBALSPIRAL COUPLINGS PCS COUPLINGS

GLOBALSPIRAL HIGH PRESSURE

COUPLINGS

PCM COUPLINGS MEGACRIMP

STEEL

Hose & Coupling Section

Characteristics of Hose Stock Types

The characteristics shown below are for the normal or usual range of these specific stocks. Stocks can be changed somewhat through different compounding to meet the requirements of specialized applications. Tube and cover stocks may occasionally be upgraded to take advantage of improved materials and technology.

For detailed information on a specific hose tube or cover stock, check the Chemical Resistance Table and also the specific hose page.

| | Neoprene (Poly- Choroprene) Type A | Nitrile (Acrylonitrile and Butadiene) Type C | Nylon Type Z | Hypalon* (Chlorosulfonated Polyethylene) Type M | EPDM (Ethylene Propylene Diene) Type P | CPE (Chlorinated Polyethylene) Type J | PTFE (Poly- tetrafluoro- ethylene) Type T |
|--------------------------------------|---|---|-------------------|--|--|--|--|
| Flame Resistance | Very Good | Poor | Good | Good | Poor | Good | Good |
| Petroleum Base Oils | Good | Excellent | Good to Excellent | Good | Poor | Very Good | Excellent |
| Diesel Fuel | Fair to Good | Good to Excellent | Good to Excellent | Good | Poor | Good | Excellent |
| Resistance to Gas Permeation | Good | Good | Good To Excellent | Good to Excellent | Fair to Good | Good | Good to Excellent |
| Weather | Good to Excellent | Poor | Excellent | Very Good | Excellent | Good | Excellent |
| Ozone | Good to Excellent | Poor for Tube; Good For Cover | Excellent | Very Good | Outstanding | Good | Excellent |
| Heat | Good | Good | Good | Very Good | Excellent | Excellent | Excellent |
| Low Temperature | Fair to Good | Poor to Fair | Excellent | Poor | Good to Excellent | Good | Excellent |
| Water-Oil Emulsions | Excellent | Excellent | Good to Excellent | Good | Poor | Excellent | Excellent |
| Water/Glycol Emulsions | Excellent | Excellent | Excellent | Excellent | Excellent | Excellent | Excellent |
| Diesters | Poor | Poor | Excellent | Fair | Excellent | Very Good | Excellent |
| Phosphate Esters | Fair (For Cover) | Poor | Excellent | Fair | Very Good | Very Good | Excellent |
| Phosphate Ester Base Emulsions | Fair (For Cover) | Poor | Excellent | Fair | Very Good | Very Good | Excellent |

*Registered trademark of DuPont.

Cover Abrasion Resistance

These comparisons are based on test results per ISO 6945 abrasion testing. The table shows the expected number of times of extended cover service life as compared to a standard cover.

| | Modified Nitrile (Standard cover) | Nylon Sleeve | XtraTuff™ | MegaTuff® |
|------------------------------|--------------------------------------|---------------------|---------------------|----------------------|
| Relative Abrasion Resistance | 1 | 15 X Standard Cover | 25 X Standard Cover | 300 X Standard Cover |

COUPLINGS STAINLESS STEEL BRAID POWER CRIMP COUPLINGS FIELD Attachable G1 & G2 COUPLINGS AIR BRAKE COPPER TUBING SURELOK HOSE CUTTERS & TOOLS COMPRESSION AIR BRAKE AIR BRAKE HOSE ASSEMBLIES AIR BRAKE FOR RUBBER HOSE FIELD ATTACHABLE C5 COUPLINGS LOCK-ON HOSE SINGLE BEAD BARBED STEM C14 COUPLINGS LOW PRESSURE COUPLINGS GLX COUPLINGS POLARSEAL COUPLINGS POLARSEAL II COUPLINGS ASSEMBLY FABRICATION POWER Steering PCTS THERMO-PLASTIC COUPLINGS ADAPTERS ACCESSORIES QUICK DISCONNECT COUPLERS BALL VALVES KITS

C4

Hose & Coupling Section

Additional Temperature Limits for Gates Hydraulic Hoses

Caution: Water, water/oil emulsions and water/glycol solutions must be kept below the temperatures listed in the table below, relative to line pressures.

| Hose | Pressure Lines | Return Lines |
|---|--------------------|-------------------|
| EFG6K, EFG5K, EFG4K, EFG3K, G5K, G3K, G2, G2L, MCPB+, M2T®, M6K, M5K, M4K+, M3K, RFS, RLA, C5C, C5E, CPS, LOC, LOL | +200°F (+93°C) | +180°F (+82°C) |
| G2H, G1H, MegaTech™ Line, G2XH, C5D, G3H, GTH, G4H, GMV, RLC, TR500, PowerClean™, M3KH, M4KH | +225°F (+107°C) | +180°F (+82°C) |

Maximum Temperature Limits for Water, Water/Oil Emulsions and Water/Glycol Solutions

Caution: The fluid manufacturer's recommended maximum operating temperature for any given fluid must not be exceeded. If different than the above listed hose temperatures, the lower limit must take precedence. Actual service life at temperatures approaching the recommended limit will depend on the particular application and the fluid being used in the hose. Intermittent (up to 10 percent of operating time) refers to momentary temperature surges. Detrimental effects increase with increased exposure to elevated temperatures.

Do NOT expose hose to maximum temperature and maximum rated working pressure at the same time.





GLOBALSPIRAL COUPLINGS PCS COUPLINGS

GLOBALSPIRAL HIGH PRESSURE COUPLINGS

STAINLESS STEEL PCM COUPLINGS MEGACRIMP COUPLINGS STAINLESS STEEL BRAID

POWER CRIMP COUPLINGS

FIELD ATTACHABLE G1 & G2 COUPLINGS

AIR BRAKE COPPER TUBING SURELOK HOSE CUTTERS & TOOLS COMPRESSION AIR BRAKE AIR BRAKE HOSE ASSEMBLIES

AIR BRAKE For Rubber Hose

FIELD ATTACHABLE C5 COUPLINGS LOCK-ON HOSE SINGLE BEAD BARBED STEM C14 COUPLINGS GLX COUPLINGS POLARSEAL II COUPLINGS POLARSEAL II COUPLINGS POLARSEAL II COUPLINGS

Hose & Coupling Section

Gates Hydraulic Hose Selection Guide

| Specification Description (Reinforcement) Use Tube Covert Covert Set 10031 6768K 466-spin.uns February reprint control 00k Nitre C Nexoure A Set 10031 6768K 466-spin.uns Emmony reprint control 00k Nitre C Nexoure A Set 10031 6763K 466-spin.uns Emmony reprint control 10k Nitre C Nexoure A Set 100315 6763K 466-spin.uns Esternety represent Partula 01k Nitre A Nexoure A Set 100315 663K 466-spin.uns Esternety represent Partula 01k Nitre A Nexoure A Set 100315 663K 4 spin.uns Esternety represent Partula 01k Nexoure A Nexoure A Set 100317 012 -spin.uns Esternety represent Partula 01k Nexoure A Nexoure A Set 100317 012 -spin.uns February represent Partula 01k Nitre C Nexoure A <th>Standard Industry</th> <th></th> <th>Construction</th> <th></th> <th colspan="6">Stock</th> | Standard Industry | | Construction | | Stock | | | | | |
|---|--|-------------------|---------------------------------------|--|----------------|--------|--------------------|-----------------|--|--|
| Ope-Intraduum Ope-Intraduum Fields Add spin, win Enternally High Processin, Petrop, Olis, National Constraints National Constetee Constantetee Constraints National Constrain | Specification | Description | (Poinforcomont) | Use | Tube Co | | | | | |
| BODE 100115 BF00K 466. sprint, wro Detarment High Transure, Texto, Olin, Detarment High Transure Texto, Olin, Metrice, Olin, | Specification | | (neimorcement) | | Name | Туре | Name | Туре | | |
| SQL 100113 P1 M6D TMP 400 BFGSK 448-spisit, wire Selection P1400 Destination P1400 Nation Selection P1400 C Neapprese Neapprese A B4 St0 TMP 450 D4 St0 TMP 45 | SAE 100R15 EN 856 TYPE 4SP/4SH | EFG6K | 4&6-spiral, wire | Extremely High Pressure, Petrol, Oils, Environmental Fluids | Nitrile | С | Neoprene | А | | |
| Set 10412 BYSR 438-galar, wie Entromoting Hubits Ninto C Nerpree A D 850 10YE 429 FFG3K 4-spiral, wie Enternetly High Pressure Reful, Olis Ninto C Nerpree A D 850 10YE 439 GKK 446-spiral, wie Enternetly High Pressure Reful, Olis Norpree A Nerpree A D 850 10YE 439 GKK 446-spiral, wie Enternetly High Pressure Reful, Olis Norpree A Nerpree A D 850 10YE 439 GKK 446-spiral, wie Enternetly High Pressure Reful, Olis Norpree A Nerpree A D 850 10YE 429 C12 4-spiral, wie Enternetly High Pressure Reful, Olis Norpree A Norpree A B 850 10YE 10YA 1 C12 4-spiral, wie Enternetly High Pressure Reful, Olis Norpree C Norpree A B 850 10YE 10YA 1 C1 C1 Set 10YE 10YA 1 C Norpree A Norpree A Norpree C Norpree C Norpree | SAE 100R13 EN 856 TYPE 4SP/4SH | EFG5K | 4&6-spiral, wire | Extremely High Pressure, Petrol, Oils, Environmental Fluids | Nitrile | С | Neoprene | А | | |
| Sec 100312 EPCOX 4-aprix, wine Externely High Pressure Parko, Dia Notation C Nooperer A DN BGT YPE C2V/C011 GRK 448-spinit, wine Externely High Pressure Parko, Dia Nooperer A Nooperer A Sec 100712 GRK 448-spinit, wine Externely High Pressure Parko, Dia Nooperer A Nooperer A Sec 100712 GRK 4-aprix, wine Externely High Pressure Parko, Dia Nooperer A Nooperer A Die So TYPE B12 C12 4-aprix, wine Parkolawn High, Dessure Parko, Dia Nooperer A Nooperer A Sec 100712 [rgs A1 GR2 2-band, wine Parkolawn Bits CF Nooperer A Sec 10071 [rgs A1 GR2 2-band, wine Trapt Earch, High Feability Nimits C NimberC 52 Genter Propristry MKK 2-band, wine Trapt Earch, High Feability Nimits C NimberC 52 Genter Propristry MKK 2-band, wine Trapt Earch, High Feability Nimits | SAE 100R12 EN 856 TYPE 4SP | EFG4K | 4&6-spiral, wire | Extremely High Pressure, Petrol, Oils, Environmental Fluids | Nitrile | С | Neoprene | А | | |
| SME 100115 GGK 448-6priz, wrie Extramity figh Pressure Petrol, Olis Neoprone A Neoprone A GME 100112 GMK 448-6priz, wrie Extramity figh Pressure Petrol, Olis Neoprone A Neoprone A GME 100112 GMK 4-6priz, write Extramity figh Pressure Petrol, Olis Neoprone A Neoprone A GME 100112 C12 4-6priz, write High Pressure Petrol, Olis Neoprone A Neoprone A GME 100112 GME GME 100112 Megal locit.** Petroleum Olis NMIe C Neoprone A GME 100112 Megal locit.** GME 100114 2-2-2rad, write Petroleum Olis OPE J Blau Tractio GME 100116 MMET 2-2-2rad, write Petroleum Olis OPE J Blau Tractio GME 100116 MMET 2-2-2rad, write Tractic | SAE 100R12 EN 856 TYPE 4SP | EFG3K | 4-spiral, wire | Extremely High Pressure Petrol, Oils | Nitrile | С | Neoprene | А | | |
| SKE 106113 DBX 4&8-spiral, wire Externally High Pressure Petrol, Dis Pasquese A Pasquese A SKE 106172 G3X 4-spiral, wire Externally High Pressure Petrol, Dis Nepprese A Nepprese A D SKE 106172 G3X 4-spiral, wire High Pressure, Petrol, Dis Nepprese A Nepprese A D SKE 10672 Type AT G2 2-braid, wire Particium Oils NET C Nepprese A D SKE 10672 Type AT G2 2-braid, wire Particium Oils NET C Nepprese C Nepprese C Nepprese C Nepprese A Nepprese | SAE 100R15 EN 856 TYPE 4SP/4SH | G6K | 4&6-spiral, wire | Extremely High Pressure | Neoprene | А | Neoprene | А | | |
| SAL 100R12 B. NB 00 PV4 430 SAL 100R1 / 2 GSK 4-spiral, wire Endmany Persoure Partol, Dils Negreere A Negreere A SAL 100R1 / 2 BL 800 DVS et al AT SML 100R2 (Pp A1 M 803 DVB 20M C12 4-spiral, wire High Pressure, Parcol, Dils Negreera A SML 100R2 (Pp A1 M 803 DVB 20M C2 2-braid, wire Petroleum Dils NEric C Negreera A SML 100R2 (Pp A1 M 803 DVB 20M GSL 2-braid, wire Petroleum Olls, Lon Temporatures Netric C Negreera A SML 100R1 (Pp A1 M 805 DVB 20M MMK 2-braid, wire Tight Exores, High Floxibility Netric C Negreera A SML 100R1 (Pp A1 M 805 DVB 20M MMK 2-braid, wire Tight Exores, High Floxibility Netric C Negreera A SML 100R1 (Pp A1 M 805 DVB 20M NMK 1.8 2-braid, wire Tight Exores, High FloxDMI1 Negreera A <t< td=""><td>SAE 100R13 EN 856 TYPE R13/4SP/4SH</td><td>G5K</td><td>4&6-spiral, wire</td><td>Extremely High Pressure Petrol, Oils</td><td>Neoprene</td><td>А</td><td>Neoprene</td><td>А</td></t<> | SAE 100R13 EN 856 TYPE R13/4SP/4SH | G5K | 4&6-spiral, wire | Extremely High Pressure Petrol, Oils | Neoprene | А | Neoprene | А | | |
| SAL 10812 C12 4-rplin4, wire High Pressure, Period, Olis Neurone A Neurone A SME 10007 Type A1 C2 2-braid, wire Petroleum Din NTEI C NBEV/CVC C2 SME 10007 Type A1 MagaTech**I 2-braid, wire Petroleum Din OFE J Blas Tacila | SAE 100R12 EN 856 TYPE 4SP | G3K | 4-spiral, wire | Extremely High Pressure Petrol, Oils | Neoprene | А | Neoprene | А | | |
| B&R:10082 Type 2N BW 10082 Type 2N | SAE 100R12 EN 856 TYPE R12 | C12 | 4-spiral, wire | High Pressure, Petrol, Oils | Neoprene | А | Neoprene | A | | |
| Set 10082 Type AT MegaTech TM II 2 braid, wire Petroleum Olis OFE J Blue Textle | SAE 100R2 Type AT | G2 | 2-braid, wire | Petroleum Oils | Nitrile | С | NBR/PVC | C2 | | |
| BAC 100P2 Type AT G2L 2 braid, wire Petroleum Olls, Low Temperatures Nitrile C Neopren A SAE 100016 MCT* 2 braid, wire Tight Bends, High Texchilly Nitrile C NetRPVC C_2 Gates Proprietary MKK 2 braid, wire Tight Bends, High Texchilly Nitrile C NetRPVC C_2 SAE 100017 MAK 2 braid, wire Tight Bends, High Texchilly Nitrile C NetRPVC C_2 SAE 100017 MAK 1 - 2-braid, wire Tight Bends, High Texchilly Nitrile C NetRPVC C_2 SAE 100017 MAK 1 - 2-braid, wire High Temperature Nitrile C NetRPVC C_2 SAE 10007 DaA AT G2PH 2-braid, wire High Temperature Nitrile C NetRPVC C_2 SAE 10007 DaA AT G1H 1-braid, wire High Temperature Nitrile C NetRPVC C_2 SAE 10007 Type AT G2PH 2-braid, kentle Petr | SAE 100R2 Type AT | MegaTech™ II | 2-braid, wire | Petroleum Oils | CPE | J | Blue Textile | | | |
| DN R65 Type 25N Data Mark Data Mark <thdata mark<="" th=""></thdata> | SAE 100R2 Type AT | G2I | 2-braid wire | Petroleum Oils, Low Temperatures | Nitrile | C | Neoprene | Δ | | |
| See Bound India Call Set Monitory Name Page Book, High Feddulity Name Page Book, High Feddulity Name C New York C2 Gates Fragmetary MMK 2-braid, wire Tight Book, High Feddulity Name C New York C2 SAE 100111 MMK 2-braid, wire Tight Book, High Feddulity Name C New York C2 SAE 100117 MMK 1.8 2-braid, wire Tight Book, High Feddulity Name C New York C2 SAE 10012 MMK 1.4 adv/wire Tight Book, High Feddulity Name C New York C2 SAE 10012 Yew AT C2291 2-braid, wire Math-Hiuk, High Temperature Name C New York C2 SAE 10012 Yew AT G1 1-braid, wire Petod. Oils, Antifeeze, Water, High Temperature Natrie C New York C2 SAE 10013 G3H 2-braid, wire Petod. Oils, Antifeeze, Water, High Temperature Natrie C Neezeee Astre York C3< | EN 853 Type 2SN | MOT® | 2 braid, wire | Tight Pondo, High Elovibility | Nitrilo | | | | | |
| Control Topicality Matrix Control Topicality Matrix C Name Name C Name Name C Name Name C Name Name <td>Gates Proprietany</td> <td>M6K</td> <td>2-braid, wire</td> <td>Tight Bends, High Flexibility</td> <td>Nitrilo</td> <td>C C</td> <td>NBR/PVC</td> <td>C2</td> | Gates Proprietany | M6K | 2-braid, wire | Tight Bends, High Flexibility | Nitrilo | C C | NBR/PVC | C2 | | |
| SAE 100819 M44- 2-braid, use Tight Bends, High Faschilly Natifie C NBR/PIC C2 SAE 100817 MGK 1.6.2 braid, wire Tight Bends, High Faschilly Natifie C NBR/PIC C2 SAE 10082 Type AT CR 1.4.1.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4 | Gates Proprietary | MOK | 2-braid, wire | Tight Bends, High Flexibility | Nitrile | C | NBR/PVC | C2 | | |
| SAE 100817 M3K 1 & 2-braid, wire Tight Bends, High Flexbilly Nitrile C NBR/PVC C2 SAE 100817 M3K 1 - braid, wire High Fressure 0II Nitrile C NBR/PVC C2 SAE 100817 Type AT 02/H 2-braid, wire High Temperature Nitrile C High Annual Mither Mither Mither Mither C High Annual Mither Mither Mither Mither C High Annual Mither Mither Mither Mither C High Annual Mither Mither Mither C High Annual Mither Mither C High Annual Mither Mither C High Annual Mither Mither C High Annual Mither High Annual Mither C High Annual Mither High Annual Mither Mither C High Annual Mither | SAE 100B19 | M4K+ | 2-braid, wire | Tight Bends, High Flexibility | Nitrile | C | NBB/PVC | C2 | | |
| SAE 100R17 M38H 1-braid, wire High Pressure 01 Nitrie C NB/PVC C2 SAE 100R2 Type XT G2H 2-braid, wire High Temparature Nitrie C Hypaon+ M SAE 100R2 Type XT G2H 2-braid, wire Multi-Huid, High Temparature CPE J CPE J SAE 100R3 Type XT G2H 2-braid, wire Multi-Huid, Temparature CPE J CPE J SAE 100R1 Type XT G1 1-braid, wire Petroleum Ols Nitrie C MSR/VC C2 SAE 100R3 G3H 2-braid, textle Petrol. Ols, Antifreeze, Water, High Temperature Nitrie C Nepprene A SAE 100R4 G4H 2-braid, textle Petrol. Ols, Antifreeze, Water, High Temperature Nitrie C Nepprene A SAE 100R4 G4H 2-braid, textle Petrol. Ols, Antifreeze, Water, High Temperature Nitrie C Nepprene A SAE 100P4 G4H 2-braid, textle Petrol. Ols, Antifreeze, Water, Figh Temperature </td <td>SAE 100R17</td> <td>МЗК</td> <td>1 & 2-braid, wire</td> <td>Tight Bends, High Flexibility</td> <td>Nitrile</td> <td>C</td> <td>NBR/PVC</td> <td>C2</td> | SAE 100R17 | МЗК | 1 & 2-braid, wire | Tight Bends, High Flexibility | Nitrile | C | NBR/PVC | C2 | | |
| EN 857 15C Math Totalu, mice Totalu, mice Totalu, mice Totalu, mice Name G Nether 50 S2 BA E 100R3 Type AT 622H 2-braid, wire Multi-Rud, High Temperature Nitrile C Hypaton+ M L100 J2AT 2-braid, wire Multi-Rud, High Temperature OFE J OPE A OPE A Departure Nitrile C Neoprene A Departure Nitrile C Neoprene A Departure Nitrile C Neoprene A Departure Nitrile </td <td>SAE 100R17</td> <td>МЗКН</td> <td>1-braid wire</td> <td>High Pressure Oil</td> <td>Nitrile</td> <td>C</td> <td>NBB/PVC</td> <td>Co</td> | SAE 100R17 | МЗКН | 1-braid wire | High Pressure Oil | Nitrile | C | NBB/PVC | Co | | |
| EN 865 11/PE 28N CPE J | EN 857 1SC SAE 100R2 Type AT | G2H | 2-braid, wire | High Temperature | Nitrile | с | Hypalon+ | о <u>2</u> М | | |
| SALE 100AC Type 1A G2/AT 2-braid, wire Multiple to the second | EN 853 TYPE 2SN | 00711 | O broid wire | Multi Fluid Lligh Tomperature | ODE | - | ODE | <u> </u> | | |
| SAE 10041 John Zukadu, Mas Industrial Jokadu Nation Nation C Nation Nation C Nation | SAE TOUR2 Type AT | G2XH | 2-braid, wire | Industrial Jack Hose | UPE Nitrilo | J | UPE NRR/DV/C | J Co | | |
| SAE 100R1 Type AT EN 853 TYPE 1SN G1H 1-braid, wire High Temperature Ntrile C Hypaloni- M SAE 100R3 EN 854 TYPE 1SN G3H 2-braid, textile Petrol. Olis, Antifreeze, Water, High Temperature Ntrile C Heoprene A SAE 100R4 G3H 1-braid, textile Petrol. Olis, Antifreeze, Water, High Temperature Ntrile C Neoprene A SAE 100R4 G4H 2-spiral, textile, helical wire Return & Suction High Temperature Ntrile C Neoprene A SAE 100R4 G4H 2-spiral, textile, helical wire Return & Suction High Temperature Ntrile C Neoprene A SAE 30R2 Type 1 & 2 RLC 3-braid, textile Return & Low Pressure Ntrile C NBR/PVC C2 SAE 1019 MegaTech*** 2-braid, write, textile Petrol. Olis, Antifreeze, Water & Air Ntrile C Textile SAE 101019 MegaTech**** 2-braid, write, textile Petrol. Olic, Art Return Line CFE J Textile <td>SAE 100R1 Type AT EN 853 Type 1SN</td> <td>G1</td> <td>1-braid, wire</td> <td>Petroleum Oils</td> <td>Nitrile</td> <td>С</td> <td>NBR/PVC</td> <td>C2</td> | SAE 100R1 Type AT EN 853 Type 1SN | G1 | 1-braid, wire | Petroleum Oils | Nitrile | С | NBR/PVC | C2 | | |
| SAE 100R3 EN 854 TYPE R3 G3H 2-braid, textile Petrol. Olis, Antifreeze, Water, High Temperature Nitrile C Neoprene A SAE 100R6 EN 854 TYPE R3 GTH 1-braid, textile Petrol. Olis, Antifreeze, Water, High Temperature Nitrile C Neoprene A SAE 100R4 G4H 2-spiral, textile, helical wire Return & Suction High Temperature Nitrile C Neoprene A SAE 30R2 Type 1 & 2 RL 1-braid, textile Return & Suction High Temperature Nitrile C Neoprene A SAE 30R2 Type 1 & 2 RL 1-braid, textile Return & Suction High Temperature Nitrile C NBRPVC C C C NBRPVC C Return & Suction High Temperature Nitrile C NBRPVC C C C RU 1-braid, textile Petrol, Olis, Antifreeze, Water & Air Nitrile C Textile - SAE 1019 MegaTech ^{TMV} 2-braid, wire, textile Petrol, Olis, Antifreeze, Water & Air Nitrile C Textile - SAE 1000 | SAE 100R1 Type AT EN 853 TYPE 1SN | G1H | 1-braid, wire | High Temperature | Nitrile | С | Hypalon+ | м | | |
| SAE 100P6 EN 85A TYPE R6 GTH 1-braid, textile Petrol. Olis, Antfreeze, Water, High Temperature Nitrile C Neoprene A SAE 100P4 G4H 2-spiral, textile, helical wire Return & Suction High Temperature Nitrile C Neoprene A SAE 30R2 Type 1 & 2 RLA 1-braid, textile Return & Suction High Temperature Nitrile C Neoprene A SAE 30R2 Type 1 & 2 RLA 1-braid, textile Return & Suction High Temperature Nitrile C Neoprene A SAE 30R2 Type 1 & 2 RLA 1-braid, textile Return & Suction High Temperature Nitrile C NeBr/PVC C2 LOL 1-braid, textile Petrol, Olis, Antifreeze, Water & Air Nitrile C Trestile | SAE 100R3 EN 854 TYPE R3 | G3H | 2-braid, textile | Petrol. Oils, Antifreeze, Water, High Temperature | Nitrile | С | Neoprene | А | | |
| SAE 100R4 G4H 2-spiral, textile, helical wire Return & Suction High Temperature Nitrile C Neoprene A SAE 100R4 GMV 2-spiral, textile, helical wire Return & Suction High Temperature Nitrile C Neoprene A SAE 30R2 Type 1 & 2 RLA 1-braid, textile Return & Low Pressure Nitrile C NBRPVC Cg. LOC 1-braid, textile Petrol, Oils, Antifreeze, Water & Air Nitrile C NBRPVC Cg. SAE J1019 MegaTech*M 2-braid, write, textile Petrol, Oils, Antifreeze, Water & Air Nitrile C Textile | SAE 100R6 EN 854 TYPE R6 | GTH | 1-braid, textile | Petrol. Oils, Antifreeze, Water, High Temperature | Nitrile | С | Neoprene | А | | |
| SAE 100R4 GMV 2-spiral, textile, helical wire Return & Low Pressure Nitrile C Neoprene A SAE 30R2 Type 1 & 2 RLA 1-braid, textile Return & Low Pressure Nitrile C NBR/PVC C2 LOC 1-braid, textile Return & Low Pressure Nitrile C NBR/PVC C2 SAE J1402, J1019 MegaTechTM 2-braid, write, textile Petrol, Olis, Antfreeze, Water & Air Nitrile C Textile SAE J1402, J1019 MegaTechTM 2-braid, write, textile Trasmission Oil Cooler, rHo Oil, Air Return Line CPE J Textile SAE J1402, D0T FMVSS106-74 TRSD0 2-braid, write, textile Petrol & Syn. Fluids, Air Brakes Nitrile C Textile SAE J1402, D0T FMVSS106-74, Type CSD 3-braid, T-W-T Petrol & Syn. Fluids, Air Brakes CPE J Textile SAE J1402, IOT FMVSS106-74, Type A CSE 3-braid, T-W-T Petrol & Syn. Fluids, Air Brakes CPE J Textile SAE J1402, IO | SAE 100R4 | G4H | 2-spiral, textile, helical wire | Return & Suction High Temperature | Nitrile | С | Neoprene | Α | | |
| SAE 30R2 Type 1 & 2 RLA 1-braid, textile Return & Low Pressure Nitrile C NBR/PVC C2 LOC 1-braid, textile Return & Low Pressure Nitrile C Textile | SAE 100R4 | GMV | 2-spiral, textile, helical wire | Return & Suction High Temperature | Nitrile | С | Neoprene | Α | | |
| HLL 3-braid, textile Heath X Low Pressure Nitrile C NBP/PVC C2 LOC 1-braid, textile Petrol, Olis, Antifrezz, Water & Air Nitrile C *** A/C2 SAE J1402, J1019 MegaTech™ 2-braid, wire, textile Hot Oli, Air Return Line CPE J Textile SAE J1402, D0T FMVSS106-74, Type All TRS00 2-braid, wire, textile Petrol & Syn. Fluids, Air Brakes Nitrile C Textile SAE J1402, D0T FMVSS106-74, Type All TCSC 3-braid, T-W-T Petrol & Syn. Fluids, Air Brakes Nitrile C Textile SAE J1402, D0T FMVSS106-74, Type All CSD 3-braid, T-W-T Petrol & Syn. Fluids, Air Brakes CPE J Textile SAE J1402, D0T FMVSS106-74, Type All CSD 3-braid, T-W-T Petrol & Syn. Fluids, Air Brakes CPE J Textile SAE J1402, D0T FMVSS106-74, Type All CSD 3-braid, T-W-T Air Brake, Power Steering, Lube Nitrile C Textile SAE J1402, D0T FMVSS106-74, Type CSD 3-braid, T-W-T Air Brake, Power Steering, Lube <td< td=""><td>SAE 30R2 Type 1 & 2</td><td>RLA</td><td>1-braid, textile</td><td>Return & Low Pressure</td><td>Nitrile</td><td>C</td><td>NBR/PVC</td><td>C2</td></td<> | SAE 30R2 Type 1 & 2 | RLA | 1-braid, textile | Return & Low Pressure | Nitrile | C | NBR/PVC | C2 | | |
| Loc 11 orbits, Littice 11 orbits 11 orbits 11 | | RLC LOC | 3-braid, textile | Return & Low Pressure | Nitrile | C | NBR/PVC Textile | 62 | | |
| SAE J1402, J1019 MegaTech™ 2-braid, wire, textile Hot Oil, Air Return Line CPE J Textile SAE J11019 MegaTech™v 250 2-braid, wire, textile Transmission 0il Cooler, Hot Oil, Air Return Line CPE J Textile SAE J1402, D0T FMVSS106-74 TR500 2-braid, wire, textile Petrol & Syn. Fluids, Air Brakes Nitrile C Textile SAE J0086, D0T FMVSS106-74, Type AI *CSC 3-braid, T-W-T Petrol & Syn. Fluids, Air Brakes CPE J Textile SAE J1402, D0T FMVSS106-74, Type AI CSD 3-braid, T-W-T Petrol & Syn. Fluids, Air Brakes CPE J Textile SAE J1527, SAE J1942, ISO 7840 CSM 1-braid, wire Marine Fuel & 0il Nitrile C NBR/PVC C2 DOTFMVSS106-74, Type AI C14 1-braid, stainless steel High Temperature, Multi Fluid, Nonconductive PIFE Stainless Steel SAE 100R14 C14 1-braid, polyester Petroleum & Synthetic Fluids, Dual Line Nylon Z Urethane U SAE 100R7 TH7DL 1-braid, polyester <td< td=""><td></td><td>LOL</td><td>1-braid, textile</td><td>Petrol, Oils, Antifreeze, Water & Air</td><td>Nitrile</td><td>C</td><td>***</td><td>A/C2</td></td<> | | LOL | 1-braid, textile | Petrol, Oils, Antifreeze, Water & Air | Nitrile | C | *** | A/C2 | | |
| SAE J1019 MegaTech TM v 250 2-braid, wire, textile Transmission Oil Cooler, Hot Oil, Air Brakes Ntrile C Textile SAE J1002, DOT FMVSS106-74, Type All TR500 2-braid, wire, textile Petrol & Syn. Fluids, Air Brakes Nitrile C Textile SAE J1007, DOT FMVSS106-74, Type All "CSC 3-braid, T-W-T Petrol & Syn. Fluids, Air Brakes CPE J Textile SAE J1527, SAE J1942, ISO 7840 C5M 1-braid, wire Marine Fuel & Oil Nitrile C NBR/PVC C2 DOTFMVSS106-74, Type Al C5E 3-braid, T-W-T Petrol & Syn. Fluids, Air Brakes NItrile C NBR/PVC C2 DOTFMVSS106-74, Type Al C5E 3-braid, T-W-T Air Brake, Power Steering, Lube Nitrile C Textile SAE 100R14 C14 1-braid, stainless steel High Temperature, Multi Fluid, Nonconductive PTFE | SAE J1402, J1019 | MegaTech™ | 2-braid, wire, textile | Hot Oil, Air Return Line | CPE | J | Textile | | | |
| SAE J1402, DOT FMVSS106-74 TR500 2-braid, wire, textile Petro 8 Syn. Fluids, Air Brakes Nitrile C Textile - SAE 100R5, DOT FMVSS106-74, Type 'C5C 3-braid, T-W-T Petr. Oli, Air Brake, Power Steering, 'Nitrile C Textile - SAE J1402, DOT FMVSS106-74, Type C5D 3-braid, T-W-T Petr. Oli, Air Brake, Power Steering, Nitrile C NBR/PVC C2 SAE J1527, SAE J1942, ISO 7840 C5M 1-braid, wire Marine Fuel & Oli Nitrile C NBR/PVC C2 DOTFMVSS106-74, Type AI C5E 3-braid, T-W-T Air Brake, Power Steering, Lube Nitrile C Textile SAE 100R14 C14C 1-braid, stainless steel High Temperature, Multi Fluid, Nonconductive PTE Stainless Steel SAE 100R14 C14CT 1-braid, stainless steel High Temperature, Multi Fluid, Conductive PTE Stainless Steel SAE 100R7 TH7 1-braid, polyester Non-conductive Nylon Z Urethane U SAE 100R7 TH7DL 1-braid, polyester Non-conductive | SAE J1019 | MegaTech™v 250 | 2-braid, wire, textile | Transmission Oil Cooler, Hot Oil, Air Return Line | CPE | J | Textile | | | |
| SAE 100R5, DOT FMVSS106-74, Type All *CSC 3-braid, T-W-T Petr. Oil, Air Brake, Power Steering *Nttrile C Textile - SAE J1402, DOT FMVSS106-74, Type All CSD 3-braid, T-W-T Petrol & Syn. Fluids, Air Brakes CPE J Textile - SAE J1402, DOT FMVSS106-74, Type All CSD 3-braid, T-W-T Petrol & Syn. Fluids, Air Brakes CPE J Textile - SAE J1402, S0 7840 CSM 1-braid, wire Marine Fuel & Oil Nitrile C Textile - DOTFMVSS106-74, Type All CSE 3-braid, T-W-T Air Brake, Power Steering, Lube Nitrile C Textile - PTFE - C14 CT 1-braid, stainless steel High Temperature, Multi Fluid, Nonconductive PTFE - Stainless Steel - SAE 100R1 C14 CT 1-braid, polyester Petroleum & Synthetic Fluids Nylon Z Urethane U SAE 100R7 TH7 1-braid, polyester Petroleum & Synthetic Fluids Nylon Z Urethane U SAE 100R7 TH7NCDL 1-braid, polyester Non-conductive, Dual Line | SAE J1402, DOT FMVSS106-74 | TR500 | 2-braid, wire, textile | Petrol & Syn. Fluids, Air Brakes | Nitrile | С | Textile | — | | |
| SAE J1402, DOT FMVSS106-74, Type AllC5D3-braid, T-W-TPetrol & Syn. Fluids, Air BrakesCPEJTextile-SAE J1527, SAE J1942, ISO 7840C5M1-braid, wireMarine Fuel & OilNitrileCNBR/PVCCDOTFMVSS106-74, Type AlC5E3-braid, T-W-TAir Brake, Power Steering, LubeNitrileCTextile-PTFECC-Air Brake, Power Steering, LubeNitrileCTextile-SAE 100R14C141-braid, stainless steelHigh Temperature, Multi Fluid, NonconductivePTFE-Stainless Steel-SAE 100R14C14CT1-braid, stainless steelHigh Temperature, Multi Fluid, ConductivePTFE-Stainless Steel-SAE 100R14C14CT1-braid, polyesterPetroleum & Synthetic FluidsNylonZUrethaneUSAE 100R7TH71-braid, polyesterPetroleum & Synthetic Fluids, Dual LineNylonZUrethaneUSAE 100R7TH7NCDL1-braid, polyesterNon-conductive, Dual LineNylonZUrethaneUSAE 100R7TH7NCDL1-braid, polyesterNon-conductive, Dual LineNylonZUrethaneUSAE 100R7TH7NCDL1-braid, polyesterNon-conductive, Dual LineNylonZUrethaneUSAE 100R8TH82-braid, PolyesterNon-conductive, Dual LineNylonZUrethaneUSAE 100R8TH82-braid, Synthetic FluidNon-conduc | SAE 100R5, DOT FMVSS106-74, Type All | *C5C | 3-braid, T-W-T | Petr. Oil, Air Brake, Power Steering | *Nitrile | С | Textile | _ | | |
| SAE J1527, SAE J1942, ISO 7840C5M1-braid, wireMarine Fuel & OilNitrileCNBR/PVCC2DOTFMVSS106-74, Type AIC5E3-braid, T-W-TAir Brake, Power Steering, LubeNitrileCTextilePTFECC141-braid, stainless steelHigh Temperature, Multi Fluid, NonconductivePTFEStainless SteelSAE 100R14C141-braid, stainless steelHigh Temperature, Multi Fluid, ConductivePTFEStainless SteelSAE 100R14C14CT1-braid, polyesterPetroleum & Synthetic FluidsNylonZUrethaneUSAE 100R7TH71-braid, polyesterPetroleum & Synthetic Fluids, Dual LineNylonZUrethaneUSAE 100R7TH7DL1-braid, polyesterNon-conductive, Dual LineNylonZUrethaneUSAE 100R7TH7DL1-braid, polyesterNon-conductive, Dual LineNylonZUrethaneUSAE 100R7TH7NC/TH7NCDL1-braid, polyesterNon-conductive, Dual LineNylonZUrethaneUSAE 100R7TH7NCDL1-braid, polyesterNon-conductive, Dual LineNylonZUrethaneUSAE 100R8TH82-braid, PolyesterNon-conductiveNylonZUrethaneUSAE 100R8TH8NC2-braid, PolyesterNon-conductiveNylonZUrethaneUSAE 100R18TH181-band, Synthetic FliberNon-conductiveNylon <td>SAE J1402, DOT FMVSS106-74, Type All</td> <td>C5D</td> <td>3-braid, T-W-T</td> <td>Petrol & Syn. Fluids, Air Brakes</td> <td>CPE</td> <td>J</td> <td>Textile</td> <td>—</td> | SAE J1402, DOT FMVSS106-74, Type All | C5D | 3-braid, T-W-T | Petrol & Syn. Fluids, Air Brakes | CPE | J | Textile | — | | |
| D0TFMVSS106-74, Type AI CSE 3-braid, T-W-T Air Brake, Power Steering, Lube Nitrile C Textile PTFE <td>SAE J1527, SAE J1942, ISO 7840</td> <td>C5M</td> <td>1-braid, wire</td> <td>Marine Fuel & Oil</td> <td>Nitrile</td> <td>С</td> <td>NBR/PVC</td> <td>C2</td> | SAE J1527, SAE J1942, ISO 7840 | C5M | 1-braid, wire | Marine Fuel & Oil | Nitrile | С | NBR/PVC | C2 | | |
| PTFEImage: Constraint of the state of the st | DOTFMVSS106-74, Type Al | C5E | 3-braid, T-W-T | Air Brake, Power Steering, Lube | Nitrile | С | Textile | _ | | |
| SAE 100R14 C14 1-braid, stainless steel High Temperature, Multi Fluid, Nonconductive PTFE — Stainless Steel — SAE 100R14 C14CT 1-braid, stainless steel High Temperature, Multi Fluid, Nonconductive PTFE — Stainless Steel — Thermoplastic //////////////////////////////////// | PTFE | | | | | | | | | |
| SAE 100R14 C14CT 1-braid, stainless steel High Temperature, Multi Fluid, Conductive PTFE — Stainless Steel — Thermoplastic | SAE 100R14 | C14 | 1-braid, stainless steel | High Temperature, Multi Fluid, Nonconductive | PTFE | _ | Stainless Steel | _ | | |
| ThermoplasticImage: Constraint of the second s | SAE 100R14 | C14CT | 1-braid, stainless steel | High Temperature, Multi Fluid, Conductive | PTFE | _ | Stainless Steel | _ | | |
| SAE 100H7 IH7 1-braid, polyester Petroleum & Synthetic Fluids Nylon Z Urethane U SAE 100R7 TH7NC/TH7NCDL 1-braid, polyester Non-conductive Nylon Z Urethane U SAE 100R7 TH7NC/TH7NCDL 1-braid, polyester Petroleum & Synthetic Fluids, Dual Line Nylon Z Urethane U SAE 100R7 TH7NCDL 1-braid, polyester Petroleum & Synthetic Fluids, Dual Line Nylon Z Urethane U SAE 100R8 TH8 2-braid, Polyester Non-conductive, Dual Line Nylon Z Urethane U SAE 100R8 TH8 2-braid, Polyester Non-conductive Nylon Z Urethane U SAE 100R18 TH18 1-band, Synthetic Fiber Non-conductive Nylon Z Urethane U SAE 100R18 TH18NC 2-band, Synthetic Fiber Non-conductive Nylon Z Urethane U SAE 100R18 TH18NC 2-band, Synthetic Fiber Non-conductive Nylon Z Urethane U Petromace J2064, Type C, Class II <td>Thermoplastic</td> <td></td> <td></td> <td>Detectours & Ouethette Fluide</td> <td></td> <td>-</td> <td></td> <td></td> | Thermoplastic | | | Detectours & Ouethette Fluide | | - | | | | |
| SAE 100R7 IH/NC/TH/NobL 1-braid, polyester Non-conductive Nylon Z Utertane U SAE 100R7 TH7DL 1-braid, polyester Petroleum & Synthetic Fluids, Dual Line Nylon Z Urethane U SAE 100R7 TH7DLDL 1-braid, polyester Non-conductive, Dual Line Nylon Z Urethane U SAE 100R8 TH8 2-braid, Polyester Petroleum & Synthetic Fluids Nylon Z Urethane U SAE 100R8 TH8NC 2-braid, Polyester Non-conductive Nylon Z Urethane U SAE 100R18 TH18 1-band, Synthetic Fiber Non-conductive Nylon Z Urethane U SAE 100R18 TH18NC 2-band, Synthetic Fiber Non-conductive Nylon Z Urethane U SAE 100R18 TH18NC 2-band, Synthetic Fiber Non-conductive Nylon Z Urethane U SAE 100R18 TH18NC 2-band, Synthetic Fiber Non-conductive Nylon Z Urethane U SAE J51 Type All Dimensions/Type D PolarSea | SAE 100R7 | | 1-braid, polyester | Petroleum & Synthetic Fluids | Nylon | Z 7 | Urethane | | | |
| Other HorinIf House, purpleFor House, purpleOther House, purple <th< td=""><td>SAE 10087</td><td>TH7DI</td><td>1-braid, polyester</td><td>Petroleum & Synthetic Fluids, Dual Line</td><td>Nylon</td><td>7</td><td>Urethane</td><td></td></th<> | SAE 10087 | TH7DI | 1-braid, polyester | Petroleum & Synthetic Fluids, Dual Line | Nylon | 7 | Urethane | | | |
| SAE 100R8 TH8 2-braid, Polyester Petroleum & Synthetic Fluids Nylon Z Urethane U SAE 100R8 TH8NC 2-braid, Polyester Non-conductive Nylon Z Urethane U SAE 100R8 TH8NC 2-braid, Polyester Non-conductive Nylon Z Urethane U SAE 100R18 TH18 1-band, Synthetic Fiber Petroleum & Synthetic Fluids Nylon Z Urethane U SAE 100R18 TH18NC 2-braid, Synthetic Fiber Non-conductive Nylon Z Urethane U SAE 100R18 TH18NC 2-band, Synthetic Fiber Non-conductive Nylon Z Urethane U SAE 100R18 TH18NC 2-band, Synthetic Fiber Non-conductive Nylon Z Urethane U SAE 100R18 TH18NC 2-band, Synthetic Fiber Non-conductive Nylon Z Urethane U SAE 100R18 TH18NC 2-band, Synthetic Fiber Non-conductive Nylon Z Urethane U SAE 100R18 TH18NC 2-band, Synthetic Fiber | SAE 100B7 | TH7NCDI | 1-braid, polyester | Non-conductive Dual Line | Nylon | 7 | Urethane | | | |
| SAE 100R8 TH8NC 2-braid, Polyester Non-conductive Nylon Z Urethane U SAE 100R18 TH18 1-band, Synthetic Fiber Petroleum & Synthetic Fluids Nylon Z Urethane U SAE 100R18 TH18 1-band, Synthetic Fiber Petroleum & Synthetic Fluids Nylon Z Urethane U SAE 100R18 TH18NC 2-band, Synthetic Fiber Non-conductive Nylon Z Urethane U SAE 100R18 TH18NC 2-band, Synthetic Fiber Non-conductive Nylon Z Urethane U SAE 100R18 TH18NC 2-band, Synthetic Fiber Non-conductive Nylon Z Urethane U SAE 100R18 TH18NC 2-band, Synthetic Fiber Non-conductive Nylon Z Urethane U SAE 100R18 TH18NC 2-band, Synthetic Fiber Non-conductive Nylon Z Urethane U SAE 101 Type All Dimensions/ Type D PolarSeal® AC134a Nylon barrier, 2-spiral, Polyester Air Conditioning (R12 and R134a) Chloroprene A EPDM P Power Steering, SAE 12050 PS188 2-braid, Nylon Power Steering Fluids, High Temperature Hypalon+ M Neoprene | SAE 100R8 | TH8 | 2-braid, Polyester | Petroleum & Synthetic Fluids | Nylon | Z | Urethane | U | | |
| SAE 100R18 TH18 1-band, Synthetic Fiber Petroleum & Synthetic Fluids Nylon Z Urethane U SAE 100R18 TH18NC 2-band, Synthetic Fiber Non-conductive Nylon Z Urethane U Refrigerant Image: Construction of the synthetic Fiber Non-conductive Nylon Z Urethane U SAE J51 Type All Dimensions/ Type D PolarSeal® AC134a Nylon barrier, 2-spiral, Polyester Air Conditioning (R12 and R134a) Chloroprene A EPDM P Power Steering, SAE J2050 PS188 2-braid, Nylon Power Steering Fluids, High Temperature Hypalon+ M Neoprene A PowerClean TM PowerClean TM 1 & 2-braid, wire, Tight Bends, High Flexibility Nitrile C NBR/PVC C2 | SAE 100R8 | TH8NC | 2-braid, Polyester | Non-conductive | Nylon | Z | Urethane | U | | |
| SAE 100R18 TH18NC 2-band, Synthetic Fiber Non-conductive Nylon Z Urethane U Refrigerant | SAE 100R18 | TH18 | 1-band, Synthetic Fiber | Petroleum & Synthetic Fluids | Nylon | Z | Urethane | U | | |
| Refrigerant Image: Chicomologic Constraints Nylon barrier, 2-spiral, Polyester Air Conditioning (R12 and R134a) Chicomologic Chicomolog | SAE 100R18 | TH18NC | 2-band, Synthetic Fiber | Non-conductive | Nylon | Z | Urethane | U | | |
| SAE J51 Type All Dimensions/ Type D PolarSeal® AC134a Nylon barrier, 2-spiral, Polyester Air Conditioning (R12 and R134a) Chloroprene A EPDM P Performance Power Steering, SAE J2050 PS188 2-braid, Nylon Power Steering Fluids, High Temperature Hypalon+ M Neoprene A PowerClean TM PowerClean TM 1 & 2-braid, wire, Tight Bends, High Flexibility Nitrile C NBR/PVC C2 | Refrigerant | | | | | | | | | |
| Power Steering, SAE J2050 PS188 2-braid, Nylon Power Steering Fluids, High Temperature Hypalon+ M Neoprene A PowerClean TM PowerClean TM 1 & 2-braid, wire, Tight Bends, High Flexibility Nitrile C NBR/PVC C2 | SAE J51 Type All Dimensions/ Type D Performance J2064, Type C, Class II | PolarSeal® AC134a | Nylon barrier, 2-spiral, Polyester | Air Conditioning (R12 and R134a) | Chloroprene | A | EPDM | Р | | |
| PowerClean TM PowerClean TM 1 & 2-braid, wire, Tight Bends, High Flexibility Nitrile C NBR/PVC C2 | Periormance Power Steering SAE 12050 | PS188 | 2-braid Nylon | Power Steering Fluids, High Temperature | Hynalon | M | Neoprene | Δ | | |
| | PowerClean™ | PowerClean™ | 1 & 2-braid, wire, | Tight Bends, High Flexibility | Nitrile | C | NBR/PVC | C2 | | |

* -4 and -5 sizes have a Neoprene tube. ** Nitrile or Neoprene † Registered trademark of DuPont.

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C6

PCTS THERMO-PLASTIC COUPLINGS

ADAPTERS ACCESSORIES QUICK DISCONNECT COUPLERS BALL VALVES KITS



Gates Hydraulic Hose Selection Guide

| | Toma Dach Size vs. Rated Working Processing (nei) | | | | | | | | | | | | | | | | |
|-------------------|---|-------|-------|--------|-------|--------|-------|-------|-------|-------|-------|-------|---------------------------------------|---------------------------------------|---------------------------------------|-----|----------|
| Description | Range (°F) | -2 | -3 | -4 | -5 | -6 | -8 | -10 | -12 | -16 | -20 | -24 | -32 | -40 | -48 | -56 | -64 |
| EFG6K | -40 +250 | | | | | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | | | | |
| EFG5K | -40 +250 | | | | | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | | | | |
| EFG4K | -40 +250 | | | | | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 | | | | | | |
| EFG3K | -40 +250 | | | | | | | | | | 3,000 | 3,000 | 3,000 | | | | |
| G6K | -40 +250 | | | | | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | | | | | |
| G5K | -40 +250 | | | | | | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | | | | |
| G3K | -40 +250 | | | | | | | | | | 3,000 | 3,000 | 3,000 | | | | |
| C12 | -40 +250 | | | | | | | | | | | 2,500 | 2,500 | | | | |
| G2 | -40 +212 | | 6,000 | 5,800 | | 4,800 | 4,000 | 3,625 | 3,100 | 2,400 | 1,825 | 1,300 | 1,175 | | | | |
| MegaTech™ II | | | | | | | | | | | 2.250 | 1.500 | 1.300 | | | | |
| 621 | -70 +212 | | | 5 800 | | 4 800 | 4 000 | 3 625 | 3 100 | 2 400 | 1 825 | 1 300 | 1 175 | 1 195 | | | |
| MOTO | 40010 | | | 5,000 | | 4,000 | 2,500 | 2,000 | 0,100 | 2,400 | 1,020 | 1,000 | 1,170 | 1,100 | | | |
| M6K | -40 +212 | | | 6,000 | | 4,000 | 3,300 | 3,000 | 2,200 | 2,000 | | | | | | | |
| Mok | -40 +212 | | | 5,000 | 5.000 | 5 000 | 5.000 | | | | | | | | | | |
| MAK+ | -40 +212 | | | 4 000 | 4 000 | 4 000 | 4 000 | 4 000 | 4 000 | | | | | | | | |
| M3K | -40 +212 | | 3 000 | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | 3 000 | | | | | | | <u> </u> |
| МЗКН | -40 +250 | | 0,000 | 3,000 | 0,000 | 3,000 | 0,000 | 0,000 | 0,000 | 0,000 | | | | | | | |
| G2H | -40 +275 | | | | | | | | | | 1,650 | 1,300 | 1,175 | | | | |
| G2XH | -40 +300 | | | 6.000 | | 5.000 | 4,250 | 3.625 | 3.100 | 2.500 | | | | | | | |
| J2AT | -40 +120 | | | 10.000 | | 10.000 | .,=== | -, | | _, | | | | | | | |
| G1 | -40 +212 | | 3,625 | 3,275 | 3,125 | 2,600 | 2,325 | 1,900 | 1,525 | 1,275 | 925 | 725 | 600 | | | | |
| G1H | -40 +275 | | | 2,750 | | 2,250 | 2,000 | 1,500 | 1,250 | 1,000 | 625 | 725 | 600 | | | | |
| G3H(C3H) | -40 +275 | | | 1,250 | | 1,125 | 1,000 | 900 | 750 | 565 | 375 | | | | | | |
| GTH(C6H) | -40 +275 | | 500 | 400 | 400 | 400 | 400 | 350 | 300 | 250 | | | | | | | |
| G4H | -40 +275 | | | | | | | | 300 | 212 | 200 | | | | | | |
| GMV | -40 +275 | | | | | | | | 350 | 300 | 250 | 162 | 112 | 68 | 62 | 56 | 56 |
| RLA | -40 +212 | | 250 | 250 | 250 | 250 | 200 | 200 | 200 | 160 | | | | | | | |
| RLC | -40 +275 | | | | | | | | | 200 | 200 | 200 | 200 | 150 | 150 | 150 | |
| LOC | -40 +212 | | | 300 | | 300 | 300 | 300 | 300 | | | | | | | | |
| LOL | -40 +212 | | 300 | 300 | 300 | 300 | 300 | 300 | 300 | | | | | | | | |
| TR500 | -40 +250 | | | 500 | | 500 | 500 | 500 | 500 | 500 | | | | | | | |
| MegaTech™ | -40 +300 | | | 1000 | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 500 | 500 | 500 | 500 | | |
| MegaTech™ 250 | -40 +212 | | | 250 | | 250 | 250 | 250 | 250 | 250 | 250 | | | | | | |
| C5C | -40 +212 | | | 3,000 | 3,000 | 2,250 | 2,000 | 1,750 | 1,500 | 800 | 625 | 500 | 350 | 350 | | | |
| C5D | -40 +300• | | | 1,500 | 1,500 | 1,500 | 1,250 | 1,250 | 750 | 400 | | | | | | | |
| C5M | -40 +212 | | | | 500 | 500 | 500 | 500 | 500 | 500 | | | | | | | |
| C5E | -40 +300• | | | 1,500 | 1,500 | 1,500 | 1,250 | 1,250 | 750 | 400 | 300 | | | | | | |
| | | | | | | | | | | | | | | | | | |
| C14 | *** | | | 1,500 | 1,500 | 1,500 | 1,000 | 800 | 800 | 800 | | | | | | | |
| C14CT | *** | | | | | 1,500 | 1,000 | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| TH7 | -40 +212 | 2,500 | 3,000 | 2,750 | 2,500 | 2,250 | 2,000 | | 1,250 | 1,000 | | | | | | | |
| TH7NC | -40 +212 | 2,500 | 3,000 | 2,750 | 2,500 | 2,250 | 2,000 | | 1,250 | 1,000 | | | | | | | |
| TH7DL | -40 +212 | | | 2,750 | 2,500 | 2,250 | 2,000 | | | | | | | | | | |
| TH7NCDL | -40 +212 | | | 2,750 | | 2,250 | 2,000 | | | | | | | | | | |
| TH8 | -40 +212 | | 5,000 | 5,000 | | 4,000 | 3,500 | | 2,250 | 2,000 | | | | | | | |
| TH8NC | -40 +212 | | | 5,000 | | 4,000 | 3,500 | | | | | | | | | | |
| TH18 | -40 +212 | | | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | | | | | | | | | |
| TH18NC | -40 +212 | | | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| PolarSeal® AC134a | -22 +257 | | | | | 500 | 500 | 500 | 500 | | | | | | | | |
| PS188 | -40 +300 | | | | | 1,500 | | | | | | | | | | | |
| David Cl | 40 010 | | | 3,500 | | 3,000 | 2,500 | | | | | | | | | | |
| PowerClean | -40 +212 | | | 6,000 | | 4,000 | 4,000 | | | | | | | | | | |
| | | | | L | | 0,000 | | | · | | | | · · · · · · · · · · · · · · · · · · · | · · · · · · · · · · · · · · · · · · · | · · · · · · · · · · · · · · · · · · · | | |

Julie

| EQUIPMENT |
|--|
| HOSE/CPLG. Selection |
| GLOBALSPIRAL Couplings |
| PCS COUPLINGS |
| GLOBALSPIRAL HIGH PRESSURE COUPLINGS |
| STAINLESS STEEL |
| PCM Couplings |
| MEGACRIMP COUPLINGS |
| STAINLESS Steel Braid |
| POWER CRIMP COUPLINGS |
| FIELD ATTACHABLE G1 & G2 |
| AIR BRAKE |
| Copper Tubing |
| SURELOK |
| CUTTERS & TOOLS |
| COMPRESSION AIR BRAKE |
| AIR BRAKE Hose Assemblies |
| AIR BRAKE For Rubber Hose |
| FIELD ATTACHABLE C5 |
| LOCK-ON |
| HOSE Single Bead |
| BARBED |
| C14 |
| LOW PRESSURE |
| GLX |
| POLARSEAL |
| POLARSEAL II |
| COUPLINGS ASSEMBLY |
| FABRICATION POWER |
| STEERING PCTS |
| THERMO- PLASTIC COUPLINGS |
| ADAPTERS |
| ACCESSORIES |
| QUICK Disconnect Couplers |
| BALL VALVES |
| NI 2 |

*** Dynamic temperatures -65 +400; Static temperatures +73 +450 • All purpose fleet application service - 40°F to +300°F (-40°C to +149°C), air to +250°F



Hose & Coupling Section

SELECTION, INSTALLATION AND MAINTENANCE OF HOSE AND HOSE ASSEMBLIES— SAE J1273 OCT96 SAE Recommended Practice

Report of the Fluid Conductors and Connectors Technical Committee, approved September 1979 and reaffirmed May 1986. Completely revised by the SAE Fluid Conductors and Connectors Technical Committee SC2— Hydraulic Hose and Hose Fittings October 1996. Rationale statement available.

1. Scope

Hose (also includes hose assemblies) has a finite life and there are a number of factors which will reduce its life. This SAE recommended practice is intended as a guide to assist system designers and/or users in the selection, installation, and maintenance of hose. The designers and users must make a systematic review of each application and then select, install, and maintain the hose to fulfill the requirements of the application. The following are general guidelines and are not necessarily a complete list.

WARNING—IMPROPER SELECTION, INSTALLATION, OR MAINTENANCE MAY RESULT IN PREMATURE FAILURES, BODILY INJURY, OR PROPERTY DAMAGE.

2. References

2.1 Applicable Documents

The following publications form a part of this specification to the extent specified herein. The latest issue of SAE publications shall apply.

2.1.1 SAE PUBLICATIONS — Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

> J516—Hydraulic Hose Fittings J517—Hydraulic Hose

3. Selection

The following is a list of factors which must be considered before final hose selection can be made:

3.1 Pressure

After determining the system pressure, hose selection must be made so that the recommended maximum operating pressure is equal to or greater than the system pressure. Surge pressures higher than the maximum operating pressure will shorten hose life and must be taken into account by the hydraulic designer.

3.2 Suction

Hoses used for suction applications must be selected to ensure the hose will withstand the negative pressure of the system.

3.3 Temperature

Care must be taken to ensure that fluid and ambient temperatures, both static and transient, do not exceed the limitations of the hose. Special care must be taken when routing near hot manifolds.

3.4 Fluid Compatibility

Hose selection must assure compatibility of the hose tube, cover, and fittings with the fluid used. Additional caution must be observed in hose selection for gaseous applications.

3.5 Size

Transmission of power by means of pressurized fluid varies with pressure and rate of flow. The size of the components must be adequate to keep pressure losses to a minimum and avoid damage to the hose due to heat generation or excessive turbulence.

3.6 Routing

Attention must be given to optimum routing to minimize inherent problems.

3.7 Environment

Care must be taken to ensure that the hose and fittings are either compatible with or protected from the environment to which they are exposed. Environmental conditions such as ultraviolet light, ozone, salt water, chemicals, and air pollutants can cause degradation and premature failure and, therefore, must be considered.

Hose & Coupling Section



3.8 Mechanical Loads

External forces can significantly reduce hose life. Mechanical loads which must be considered include excessive flexing, twisting, kinking, tensile or side loads, bend radius, and vibration. Use of swivel type fittings or adapters may be required to ensure no twist is put into the hose. Unusual applications may require special testing prior to hose selection.

3.9 Abrasion

While a hose is designed with a reasonable level of abrasion resistance, care must be taken to protect the hose from excessive abrasion which can result in erosion, snagging, and cutting of the hose cover. Exposure of the reinforcement will significantly accelerate hose failure.

3.10 Proper End Fitting

Care must be taken to ensure proper compatibility exists between the hose and coupling selected based on the manufacturer's recommendations substantiated by testing to industry standards such as SAE J517. End fitting components from one manufacturer are usually not compatible with end fitting components supplied by another manufacturer (i.e., using a hose fitting nipple from one manufacturer with a hose socket from another manufacturer). It is the responsibility of the fabricator to consult the manufacturer's written instruction or the manufacturer directly for proper end fitting componentry.

3.11 Length

When establishing proper hose length, motion absorption, hose length changes due to pressure, as well as hose and machine tolerances must be considered.

3.12 Specifications and Standards

When selecting hose, government, industry, and manufacturers' specifications and recommendations must be reviewed as applicable.

3.13 Hose Cleanliness

Hose components vary in cleanliness levels. Care must be taken to ensure that the assemblies selected have an adequate level of cleanliness for the application.

3.14 Electrical Conductivity

Certain applications require that hose be non-conductive to prevent electrical current flow. Other applications require the hose to be sufficiently conductive to drain off static electricity. Hose and fittings must be chosen with these needs in mind.

4. Installation

After selection of proper hose, the following factors must be considered by the installer.

4.1 Pre-Installation Inspection

Prior to installation, a careful examination of the hose must be performed. All components must be checked for correct style, size, and length. In addition, the hose must be examined for cleanliness, I.D. obstructions, blisters, loose cover, or any other visible defects.

4.2 Follow Manufacturers' Assembly Instructions

Hose assemblies may be fabricated by the manufacturer, an agent for or customer of the manufacturer, or by the user. Fabrication of permanently attached fittings to hydraulic hose requires specialized assembly equipment. Field-attachable fittings (screw style and segment clamp style) can usually be assembled without specialized equipment, although many manufacturers provide equipment to assist in this operation. SAE J517 hose from one manufacturer is usually not compatible with SAE J516 fittings supplied by another manufacturer. It is the responsibility of the fabricator to consult the manufacturer's written assembly instructions or the manufacturers directly before intermixing hose and fittings from two manufacturers. Similarly, assembly equipment from one manufacturer is usually not interchangeable with that of another manufacturer. It is the responsibility of the fabricator to consult the manufacturer's written instructions or the manufacturer directly for proper assembly equipment. Always follow the manufacturer's instructions for proper preparation and fabrication of hose assemblies.

4.3 Minimum Bend Radius

Installation at less than minimum bend radius may significantly reduce hose life. Particular attention must be given to preclude sharp bending at the hose/ fitting juncture.

| EQUIFINIENT |
|---------------------------------|
| HOSE/CPLG. SELECTION |
| GLOBALSPIRAL COUPLINGS |
| PCS COUPLINGS |
| GLOBALSPIRAL HIGH PRESSURE |
| COUPLINGS Staini FSS |
| STEEL |
| COUPLINGS |
| COUPLINGS |
| stainless Steel Braid |
| POWER CRIMP COUPLINGS |
| FIELD ATTACHABLE |
| G1 & G2 COUPLINGS |
| AIR BRAKE |
| TUBING |
| HOSE |
| CUTTERS & TOOLS |
| COMPRESSION AIR BRAKE |
| AIR BRAKE HOSE Assemblies |
| AIR BRAKE |
| FOR RUBBER Hose |
| FIELD Attachable C5 |
| COUPLINGS |
| HOSE |
| SINGLE BEAD |
| STEM |
| C14 Couplings |
| LOW PRESSURE |
| COUPLINGS |
| |
| COUPLINGS |
| POLARSEAL II Couplings |
| ASSEMBLY FABRICATION |
| POWER Steering |
| PCTS THERMO- |
| PLASTIC Couplings |
| ADAPTERS |
| QUICK |
| DISCONNECT COUPLERS |
| BALL VALVES KITS |
| - |

C9



GLOBALSPIRAL Couplings

PCS COUPLINGS

GLOBALSPIRAL

HIGH PRESSURE

STEEL

COUPLINGS

STAINLESS

PCM Couplings

MEGACRIMP

COUPLINGS

STAINLESS STEEL BRAID

COUPLINGS FIELD ATTACHABLE

POWER CRIMP

G1 & G2 COUPLINGS

COPPER TUBING

SURELOK

HOSE CUTTERS &

TOOLS COMPRESSION AIR BRAKE

AIR BRAKE Hose

ASSEMBLIES AIR BRAKE

FOR RUBBER

C5 COUPLINGS

LOCK-ON

HOSE

SINGLE BEAD

BARBED STEM

1 OW

C14 COUPLINGS

PRESSURE

GLX COUPLINGS

POLARSEAL

COUPLINGS POLARSEAL II COUPLINGS

ASSEMBLY FABRICATION

POWER STEERING PCTS

THERMO-PLASTIC

COUPLINGS

ACCESSORIES

QUICK DISCONNECT COUPLERS

BALL VALVES

KITS

FIELD ATTACHABLE

AIR BRAKE

Hose & Coupling Section

4.4 Twist Angle and Orientation

Hose installations must be such that relative motion of machine components produces bending of the hose rather than twisting.

4.5 Securement

In many applications, it may be necessary to restrain, protect, or guide the hose to protect it from damage by unnecessary flexing, pressure surges, and contact with other mechanical components. Care must be taken to ensure such restraints do not introduce additional stress or wear points.

4.6 Proper Connection of Ports

Proper physical installation of the hose requires a correctly installed port connection while ensuring that no twist or torque is put into the hose.

4.7 Avoid External Damage

Proper installation is not complete without ensuring that tensile loads, side loads, kinking, flattening, potential abrasion, thread damage, or damage to sealing surfaces are corrected or eliminated.

4.8 System Check Out

After completing the installation, all air entrapment must be eliminated, and the system pressurized to the maximum system pressure and checked for proper function and freedom from leaks.

NOTE-Avoid potential hazardous areas while testing.

5. Maintenance

Even with proper selection and installation, hose life may be significantly reduced without a continuing maintenance program.

Frequency should be determined by the severity of the application and risk potential. A maintenance program should include the following as a minimum:

5.1 Hose Storage

Hose products in storage can be affected adversely by temperature, humidity, ozone, sunlight, oils, solvents, corrosive liquids and fumes, insects, rodents, and radioactive materials. Storage areas should be relatively cool and dark and free of dust, dirt, dampness, and mildew.

5.2 Visual Inspections

Any of the following conditions requires replacement of the hose:

- a. Leaks at fitting or in hose. (Leaking fluid is a fire hazard.)
- b. Damaged, cut, or abraded cover. (Any reinforcement exposed.)
- c. Kinked, crushed, flattened, or twisted hose.
- d. Hard, stiff, heat cracked, or charred hose.
- e. Blistered, soft, degraded, or loose cover.
- f. Cracked, damaged, or badly corroded fittings.
- g. Fitting slippage on hose.

5.3 Visual Inspections

The following items must be tightened, repaired, or replaced as required:

- a. Leaking port conditions.
- b. Clamps, guards, shields.
- c. System fluid level, fluid type, and any air entrapment.

5.4 Functional Test

Operate the system at maximum operating pressure and check for possible malfunctions and freedom from leaks.

NOTE-Avoid potential hazardous areas while testing.

5.5 Replacement Intervals

Specific replacement intervals must be considered based on previous service life, government or industry recommendations, or when failures could result in unacceptable down time, damage, or injury risk.

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