

# – QUICK REFERENCE – HOSE & COUPLINGS

The Society of Automotive Engineers (SAE) has developed standards for hose manufacturers. These standards address areas like temperature resistance, impulse performance, change in length, etc. **Cat hose products are designed, manufactured and tested to exceed SAE standards**, something that has made them the preferred choice in earthmoving and many other applications. The following charts illustrate ways Cat hoses exceed the industry requirements.

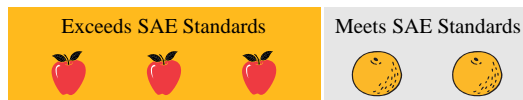
## Cat Specifications vs. Industry

Cat	Temp. Range F	SAE	Temp. Range F
716	-40 to +275	100R1	-40 to +212
294	-40 to +212	100R2	-40 to +212
844	-40 to +275	100R4	-40 to +212
556	-40 to +250	100R5	-40 to +212
1028	-70 to +212	100R7	-40 to +200
XT-3 ES	-40 to +250	100R12	-40 to +250
XT-5	-40 to +250	100R13	-40 to +250
XT-6 & ES	-40 to +250	100R15	-40 to +250
1543	-20 to +250	J51 TYPE A	-20 to +250
1130	-55 to +300	J1402	-40 to +200

### Impulse Cycles

SAE 100R1	150,000
<b>Cat 716</b>	<b>250,000</b>
SAE 100R2	200,000
<b>Cat 294</b>	<b>500,000</b>
SAE 100R12	500,000
<b>Cat XT-3 ES</b>	<b>1,000,000</b>
SAE 100R13	500,000
<b>Cat XT-5</b>	<b>1,000,000</b>
SAE 100R15	500,000
<b>Cat XT-6 ES</b>	<b>1,000,000</b>

**Know What You're Selling Against  
... Don't Be Fooled!**



SAE	Cat	Parker Premium	Gates Premium	Parker Basic	Gates Basic
100R1	716	421HT	C1TH	421	C1T
100R2	294	381	C2ATH	301	C2AT
100R4	844	881HT	G4H	881	C4
100R12	XT-3 ES	772		77C	C12M(C12)
100R13	XT-5	782		78C	C13(G5K)
100R15	XT-6 ES	792			G6K

## Replace Hoses Immediately if They Are

- Twisted, kinked, crushed, or flattened
- Cracked, corroded or abraded
- Leaking
- Blistered
- Hard, stiff, heat cracked, or charred

## 7 Reasons Hose Assemblies Fail

- 1) Fatigue
- 2) Abrasion/External Damage
- 3) Improper Application
- 4) Improper Assembly
- 5) Improper Installation
- 6) Faulty Tooling
- 7) Faulty Material

## Remembering the word

# STAMPED

can help you consider all the necessary  
hose replacement criteria

**SIZE** – 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.

**TEMPERATURE** – Know the normal operating temperature of the hydraulic system.

**APPLICATION** – Have an idea of the working conditions and implement cycle times.

**MEDIA** – Know the type of fluid being used.

**PRESSURE** – Know the maximum operating pressure of the system.

**ENDS OF COUPLING** – Identify correct end connections, threads, and configurations.

**DELIVERY** – On suction applications know the amount of vacuum/velocity a hose can withstand.