

## SAE HYDRAULIC HOSE SPECIFICATIONS (SAE J517)

### General

Hydraulic hose has a finite service life, which can be reduced by many factors including:

- Flexing the hose to less than the minimum specified bend radius.
- Twisting, pulling, kinking, crushing or abrasion.
- Operation outside of the specified temperature range.
- Exposing the hose to pressure spikes above the maximum specified working pressure.
- Frequency and amplitude of pressure fluctuations.

### Hose Construction

SAE HOSE TYPE	INNER TUBE	REINFORCEMENT	COVER	OPERATING TEMPERATURE °F
100R1-A	Oil resistant synthetic rubber	One wire braid	Oil resistant synthetic rubber	-40 to 200
100R1-AT	Oil resistant synthetic rubber	One wire braid	Oil resistant synthetic rubber 'non-skive'	-40 to 200
100R2-A	Oil resistant synthetic rubber	Two wire braids	Oil resistant synthetic rubber	-40 to 200
100R2-AT	Oil resistant synthetic rubber	Two wire braids	Oil resistant synthetic rubber 'non-skive'	-40 to 200
100R2-B	Oil resistant synthetic rubber	Two spiral plies and one braid of wire	Oil resistant synthetic rubber	-40 to 200
100R2-BT	Oil resistant synthetic rubber	Two spiral plies and one braid of wire	Oil resistant synthetic rubber 'non-skive'	-40 to 200
100R3	Oil resistant synthetic rubber	Two textile braids	Oil resistant synthetic rubber	-40 to 200
100R4 (suction hose)	Oil resistant synthetic rubber	Textile plies or braids with spiral body wire	Oil resistant synthetic rubber	-40 to 200
100R5	Oil resistant synthetic rubber	Two textile braids separated by one wire braid	Textile braid impregnated with oil resistant synthetic rubber compound	-40 to 200
100R6	Oil resistant synthetic rubber	One textile braid	Oil resistant synthetic rubber	-40 to 200
100R7	Oil resistant thermoplastic	Synthetic fiber	Oil resistant thermoplastic	-40 to 200
100R8	Oil resistant thermoplastic	Synthetic fiber	Oil resistant thermoplastic	-40 to 200
100R9-A	Oil resistant synthetic rubber	Four spiral wire plies	Oil resistant synthetic rubber	-40 to 200
100R9-AT	Oil resistant synthetic rubber	Four spiral wire plies	Oil resistant synthetic rubber 'non-skive'	-40 to 200
100R10-A	Oil resistant synthetic rubber	Four spiral wire plies	Oil resistant synthetic rubber	-40 to 200
100R10-AT	Oil resistant synthetic rubber	Four spiral wire plies	Oil resistant synthetic rubber 'non-skive'	-40 to 200

<b>SAE HOSE TYPE</b>	<b>INNER TUBE</b>	<b>REINFORCEMENT</b>	<b>COVER</b>	<b>OPERATING TEMPERATURE °F</b>
100R11	Oil resistant synthetic rubber	Six spiral plies of heavy wire	Oil resistant synthetic rubber	-40 to 200
100R12 (high impulse)	Oil resistant synthetic rubber	Four spiral plies of heavy wire	Oil resistant synthetic rubber	-40 to 200
100R13 (high impulse)	Oil resistant synthetic rubber	Multiple spiral plies of heavy wire	Oil resistant synthetic rubber	-40 to 250
100R14-A	PTFE	One braid of 303XX stainless steel wire	None	-65 to 400
100R14-B	PTFE with electrically conductive inner surface	One braid of 303XX stainless steel wire	None	-65 to 400

### Hose Specifications

<b>SAE HOSE TYPE</b>	<b>I.D. INCHES</b>	<b>MAX. O.D. INCHES</b>	<b>MIN. BEND RADIUS INCHES</b>	<b>MAX. WORKING PRESSURE PSIG</b>	<b>MIN. BURST PRESSURE PSIG</b>
100R1-A	1/4	0.656	4	2750	11000
	3/8	0.812	5	2250	9000
	1/2	0.938	7	2000	8000
	5/8	1.062	8	1500	6000
	3/4	1.219	9.5	1250	5000
	1	1.547	12	1000	4000
	1 1/4	1.875	16.5	625	2500
	1 1/2	2.125	20	500	2000
	2	2.688	25	375	1500
100R1-AT	1/4	0.557	4	2750	11000
	3/8	0.713	5	2250	9000
	1/2	0.846	7	2000	8000
	5/8	0.971	8	1500	6000
	3/4	1.127	9.5	1250	5000
	1	1.440	12	1000	4000
	1 1/4	1.766	16.5	625	2500
	1 1/2	2.047	20	500	2000
	2	2.594	25	375	1500
100R2-A&B	1/4	0.719	4	5000	20000
	3/8	0.875	5	4000	16000
	1/2	1.000	7	3500	14000
	5/8	1.125	8	2750	11000
	3/4	1.281	9.5	2250	9000
	1	1.609	12	2000	8000
	1 1/4	2.062	16.5	1625	6500
	1 1/2	2.312	20	1250	5000
	2	2.812	25	1125	4500

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100R2-AT&BT	1/4	0.619	4	5000	20000
	3/8	0.777	5	4000	16000
	1/2	0.908	7	3500	14000
	5/8	1.034	8	2750	11000
	3/4	1.190	9.5	2250	9000
	1	1.531	12	2000	8000
	1 1/4	1.953	16.5	1625	6500
	1 1/2	2.203	20	1250	5000
	2	2.703	25	1125	4500
100R3	1/4	0.594	3	1250	5000
	3/8	0.781	4	1125	4500
	1/2	0.969	5	1000	4000
	5/8	1.094	5.5	875	3500
	3/4	1.281	6	750	3000
	1	1.547	8	565	2260
	1 1/4	1.812	10	375	1500
100R4	3/4	1.375	5	300	1200
	1	1.625	6	250	1000
	1 1/4	2.000	8	200	800
	1 1/2	2.250	10	150	600
	2	2.750	12	100	400
	2 1/2	3.250	14	62	248
	3	3.750	18	56	224
	3 1/2	4.250	21	45	180
4	4.750	24	35	140	
100R5	1/4	0.601	3.38	3000	12000
	1/2	0.945	5.5	1750	7000
	5/8	1.101	6.5	1500	6000
	1 1/8	1.531	9	625	2500
	1 3/8	1.781	10.5	500	2000
	1 13/16	2.266	13.25	350	1400
100R6	1/4	0.531	2.5	400	1600
	3/8	0.656	3	400	1600
	1/2	0.812	4	400	1600
	5/8	0.938	5	350	1400
	3/4	1.000	6	300	1200
100R7	1/4	0.538	4	2750	11000
	3/8	0.725	5	2250	9000
	1/2	0.885	7	2000	8000
	5/8	1.015	8	1500	6000
	3/4	1.125	9.5	1250	5000
	1	1.445	12	1000	4000
100R8	1/4	0.660	4	5000	20000
	3/8	0.800	5	4000	16000
	1/2	0.970	7	3500	14000
	5/8	1.175	8	2750	11000
	3/4	1.300	9.5	2250	9000
1	1.520	12	2000	8000	

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100R9-A	3/8	0.875	5	4500	18000
	1/2	1.000	7	4000	16000
	3/4	1.266	9.5	3000	12000
	1	1.609	12	3000	12000
	1 1/4	2.062	16.5	2500	10000
	1 1/2	2.312	20	2000	8000
	2	2.875	26	2000	8000
100R9-AT	3/8	0.831	5	4500	18000
	1/2	0.958	7	4000	16000
	3/4	1.255	9.5	3000	12000
	1	1.594	12	3000	12000
	1 1/4	1.997	16.5	2500	10000
100R10-A	1/4	0.844	5	8750	35000
	3/8	0.969	6	7500	30000
	1/2	1.125	8	6250	25000
	3/4	1.469	11	5000	20000
	1	1.797	14	4000	16000
	1 1/4	2.062	18	3000	12000
	1 1/2	2.312	22	2500	10000
	2	2.844	28	2500	10000
100R10-AT	3/4	1.450	11	5000	20000
	1	1.790	14	4000	16000
	1 1/4	2.060	18	3000	12000
	1 1/2	2.310	22	2500	10000
100R11	2	2.840	28	2500	10000
	1/4	0.969	5	11250	45000
	3/8	1.094	6	10000	40000
	1/2	1.250	8	7500	30000
	3/4	1.594	11	6250	25000
	1	1.953	14	5000	20000
	1 1/4	2.219	18	3500	14000
100R12	1 1/2	2.469	22	3000	12000
	2	3.031	28	3000	12000
	3/8	0.828	5	4000	16000
	1/2	0.966	7	4000	16000
	3/4	1.241	9.5	4000	16000
	1	1.542	12	4000	16000
	1 1/4	1.912	16.5	3000	12000
100R13	1 1/2	2.167	20	2500	10000
	2	2.688	25	2500	10000
	3/4	1.306	9.5	5000	20000
	1	1.567	12	5000	20000
	1 1/4	2.021	16.5	5000	20000
100R14	1 1/2	2.315	20	5000	20000
	2	2.862	25	5000	20000
	1/4	0.397	3	1500	6000
	3/8	0.526	5	1500	6000
	1/2	0.663	6.5	800	3200
	5/8	0.793	7.75	800	3200
	3/4	0.917	9	800	3200
	1	1.175	12	800	3200