7100 and 7200 Series Tractor
Service Manual
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CASE CORPORATION
700 STATE STREET
RACINE, WI 53404 U.S.A.

Reprinted

Rac 8-91778

Issued February, 1994 (Revised January, 1996)

Section

1001

GENERAL INFORMATION

CASE CORPORATION

Rac 8-91581

January, 1988 (Revised February, 1991

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CONVERSION FACTORS

U.S. Customary to SI (Metric) Units

	Multiply	By	To Obtain: Multiply	By	To Obtain
Area.	square foot (ft^2)	0 092 903	square meter (m^2)	10.763 91	square foot (ft^2)
	acre	0.404 686	hectar (ha)	2.471 05	acre
Force·	ounce force (ozf)	0 278 014	newton (N)	3.596 942	ounce force (ozf)
	pound force (16f)	4 448 222	newton (N)	0.224 809	pound force (lbf)
Length·	inch (in)	25 4	millimetre (mm)	0.039 370	inch (in)
	foot (ft)	0 304 8	meter (m)	3.280 804	foot (ft)
	mile	1 609 344	kilometer (km)	0.621 371	mile
Mass·	pound (lb)	0 453 592	kilogram (kg)	2.204 622	pound (lb)
Mass/Area.	ton/acre	2241 702	kilogram per hectare (kg/ha)	0.000 446	ton/acre
Mass/Energy· (Fuel Consumption)	pound per brake horsepower-hour (lb/bhp-h)	608.277 4	gram per kilowatt hour (g/kwh)	0.001 644	pound per brake horsepower-hour (lb/bhp-h)
Mass/Volume (Density)	pound per cubic yard (lb/yd^3) 0 593276	0.593 276	kilogram per cubic meter (kg/m^3)	1.685 555	pound per cubic yard (lb/yd^3)
Power	horsepower - U.S. customary (hp - U S. customary)	0 745 700	kilowatt (kw)	1.341 02	horsepower - U.S. customary (hp-U.S. customary)
Pressure·	pound per square inch (psi)	6.894 757	kilopascal (kPa)	0.145 038	pound per square inch (psi)
Temperature	degrees Fahrenheit (°F)	TC = 5/9 (TF-32)	degree Celsius (°C)	TF = 1.8 TC + 32	degree Fahrenheit (°F)
Torque	pound inch (lb in)	0.112 985	newton meter (Nm)	8.850 748	pound inch (lb in)
	pound foot (lb ft)	1.355 818	newton meter (Nm)	0.737 562	pound foot (lb ft)
Velocity (Speed)	miles per hour (mph)	1 609 344	kilometer per hour (km/h)	0.621 371	miles per hour (mph)
Volume·	cubic inch (in^3)	16.387 06	cubic centimeter (cm^3)	0.061 024	cubic inch (in^3)
	cubic foot (ft^3)	0 028 317	cubic meter (m^3)	35.314 66	cubic foot (ft^3)
	cubic yard (yd^3)	0.764 555	cubic meter (m^3)	1.307 950	cubic yard (yd^3)
	ounce-U.S. fluid (oz)	29 573 53	milliliter (ml)	0.033 814	ounce-U.S. fluid (oz)
	quart-U S liquid (qt)	0 946 353	liter (1)	1.056 688	quart-U.S. liquid (qt)
	quart-Imperial (qt)	1 136 523	liter (1)	0.879 877	quart-Imperial (qt)
	gallon-U S liquid (gal)	3 785 412	liter (1)	0.264 172	gallon-U.S. liquid (gal)
	gallon-Imerrial (gal)	4.546 092	liter (1)	0.219 969	gallon-Imperial (gal)
Volume/Area	bushel (U S) per acre	0 087 078	cubic meter per hectare (m^3/ha)	11.484 000	bushel (U.S.) per acre
Volume/Time. (Flow)	gallon per minute (U S.) (gpm U S)	3 785 412	liter per minute (l/m)	0.264 172	gallon per minute (U.S.) (gpm U.S.)
	gallon per minute (Imperial) (gpm Imp)	4 546 092	liter per minute (l/m)	0.219 969	gallon per minute (Imperial) (gpm Imp.)
Horsepower	U S customary hp	1.014	metric horsepower	0.986 3	U.S. customary hp
	net engine hp	0.815*	P.T O. observed hp		
	net engine hp	0 70*	mox drawbar hp		

SI (Metric) Units to U.S. Customary

* Approximation based on observed tests

SAE FASTENER TORQUE CHART

NOTE: Use these torques, unless special torques are specified Values are for UNC and UNF thread fasteners, plated or unplated, as received from supplier. Fasteners can be dry or lubricated with normal engine oil Values do not apply if graphite, moly-disulphide or other extreme pressure lubricant is used

SAE Grade No	2				5				8*			
Bolt head identification (See Note 1)												
Bolt Size	LB FT		Nm		LB FT		Nm		LB FT		Nm	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
1/4	5	6	7	8	9	11	12	15	12	15	16	20
5/16	10	12	14	16	17	20 5	23	28	24	29	33	39
3/8	20	23	27	31	35	42	48	57	45	54	61	73
7/16	30	35	41	47	54	64	73	87	70	84	95	114
1/2	45	52	61	70	80	96	109	130	110	132	149	179
9/16	65	75	88	102	110	132	149	179	160	192	217	260
5/8	95	105	129	142	150	180	203	244	220	264	298	358
3/4	150	185	203	251	270	324	366	439	380	456	515	618
7/8	160	200	217	271	400	480	542	651	600	720	814	976
1	250	300	339	406	580	696	787	944	900	1080	1220	1464
1-1/8					800	880	1085	1193	1280	1440	1736	1953
1-1/4					1120	1240	1519	1681	1820	2000	2468	2712
1-3/8					1460	1680	1980	2278	2380	2720	3227	3688
1-1/2					1940	2200	2631	2983	3160	3560	4285	4827

NOTE 1· Bolt head identification marks as per grade Manufacturing marks will vary *Thick nuts must be used with Grade 8 bolts

METRIC FASTENER (ISO) TORQUE CHART

NOTE: Use these torques, unless special torques are specified Values are for course thread fasteners, plated or unplated, as received from supplier Fasteners can be dry or lubricated with normal engine oil Values do not apply if graphite, moly-disulphide or other extreme pressure lubricant is used

ISO Class No	8 8				10 9				12 9			
Bolt head identification (See Note 1)												
Bolt Size	Nm		LB FT		Nm		LB FT		Nm		LB FT	
	Min.	Max	Min	Max.	Min.	Max	Min	Max	Min.	Max.	Min	Max
M4	3	4	2	3	4	5	3	4				
M5	6.5	8	5	6	9.5	11	7	8				
M6	10.5	12	8	9	15	17.5	11	13				
M8	26	31	19	23	37	43	27	32				
M10	52	61	38	45	73	87	54	64				
M12	90	107	66	79	125	150	93	112				
*M14	144	172	106	127	200	245	149	179				
M16	217	271	160	200	310	380	230	280				
M20	434	515	320	380	610	730	450	540				
M24	675	815	500	600	1050	1275	780	940				
M30	1250	1500	920	1100	2000	2400	1470	1770				
M36	2175	2600	1600	1950	3500	4200	2580	3090				

Because of the low ductility of these fasteners, the torque range is to be determined individually for each application As a general rule, the torque ranges specified for grade 10 9 fasteners can be used satisfactorily on 12 9 fasteners

*M14 is not a preferred size

NOTE 1. Bolt head identification marks as per grade Manufacturing marks will vary

STANDARD TORQUE DATA FOR HYDRAULIC TUBES AND FITTINGS

TUBE NUTS FOR 37° FLARED FITTINGS							O-RING BOSS PLUGS, ADJUSTABLE FITTING LOCK NUTS, SWIVEL JIC - 37° SEATS			
	TUBING O.D.		THREAD SIZE	LB FT		Nm		LB FT		Nm	
SIZE	Inches	mm		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
4	1/4	6.4	7/16-20	9	12	12	16	6	10	8	14
5	5/16	7.9	1/2-20	12	15	16	20	10	15	14	20
6	3/8	9.5	9/16-18	21	24	29	33	15	20	20	27
8	1/2	12.7	3/4-18	35	40	47	54	25	30	34	41
10	5/8	15.9	7/8-14	53	58	72	79	35	40	47	54
12	3/4	19.1	1-1/16-12	77	82	104	111	60	70	81	95
14	7/8	22.2	1-3/16-12	90	100	122	136	70	80	95	109
16	1	25.4	1-5/16-12	110	120	149	163	80	90	108	122
20	1-1/4	31.8	1-5/8-12	140	150	190	204	95	115	129	156
24	1-1/2	38.1	1-7/8-12	160	175	217	237	120	140	163	190
32	2	50.8	2-1/2-12	225	240	305	325	250	300	339	407

Above torque figures are recommended for plain, cadmium or zinc plated fittings, dry or wet installations and swivel nuts either swaged or brazed. These torques are not recommended for tubes 1/2 inch (12.7 mm) O.D. and larger with wall thickness of 0.035 inch (0.889 mm) or less. The torque is specified for 0.035 inch (0.889 mm) wall tubes on each application individually.

FLUID CAPACITIES AND TYPES

Engine Crankcase Capacity, Refill	20 Litres
New	22 Litres
Fluid Type	Case No. 1 Multi-Viscosity Engine Oil
Transmission/Hydraulic System Capacity, Refill	162 Litres
New	191.2 Litres
Fluid Type	Hy-Tran Plus ® Fluid
Differential Housing Capacity - MFD	11 Litres
Planetary Housing Capacity - MFD (Each)	1 Quart (0.9 Litres)
Fluid Type	Case 135H EP Gear Lubricant Use one pint of Limited Slip additive in the differential
Cooling System Capacity	28.4 Litres
Fluid Type	50 Percent Ethylene Glycol Coolant

ENGINE SPEEDS

Governed Engine Speed without Load	2315 to 2395 RPM
Rated Engine Speed	2200 RPM
Engine Idle Speed	825 to 875 RPM

NUMBER OF TEETH ON THE FLYWHEEL 137

FUSES

Dome Lamp and Radio Clock	5 Amp
Fuel Shut Off	5 Amp
Shut Down Override	15 amp
Instrument Cluster - Run Position	7.5 Amp
Instrument Cluster - Accessory Position	5 Amp
Radio	5 Amp
Electronic Hitch System	7.5 Amp
Cigar Lighter	10 Amp
Ether Starting Aid	15 Amp
Differential Lock	10 Amp
Tail Lamps	10 Amp
Warning Lamps	15 Amp
Cab Roof Work Lamps	15 Amp
Mechanical Front Drive (If equipped)	7.5 Amp
Creeper Drive (If equipped)	7.5 Amp

BULB AND LAMP REPLACEMENT

Dome Lamp Bulb	No. 3050958R1
Console Lamp Bulb	No. 194
Flasher Lamp Bulb	No. 1156
Head Lamps	No. H3 and H4
Front and Rear Flood Lamps	No. H3
Tail Lamp Bulbs	No. 168
Rocker Switch Bulb	No. 3141107R1
Three Point Hitch Indicator Bulb	No. 182

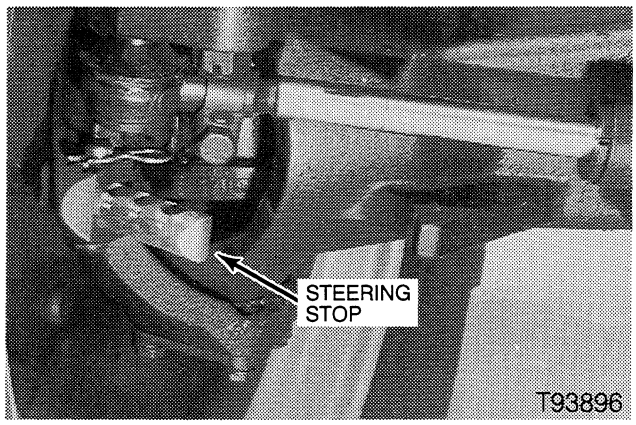
STEERING AND OSCILLATION STOPS - MFD

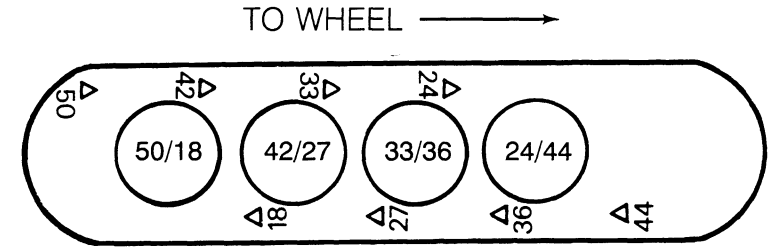
Tractors with mechanical front drive (MFD) are equipped with steering and oscillation stops. The steering and oscillation stops are used to give the required steering clearance between the front tires and tractor frame. The front tire size and tread width being used, will determine the required steering and oscillation angles.

Steering Stop

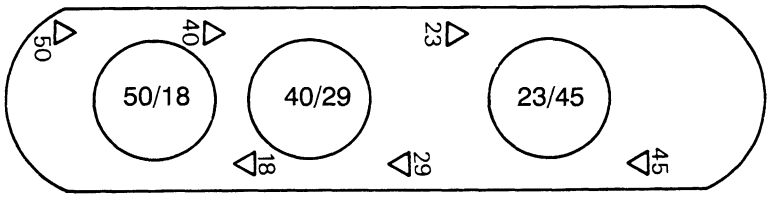
Each adjustment hole in the steering stop is identified with an arrow and a number. With the arrow pointing toward the wheel, the number indicates the turn angle when the mounting pin is installed in that hole. The steering stop can be installed in either direction depending on the tire size and tread width being used. See Steering and Oscillation Stop Charts for more information.

NOTE: *The numbers shown in the hole outlines indicates the steering angle in degrees for that hole when installed in that direction.*





For All Tires Sizes Except 13.6-28

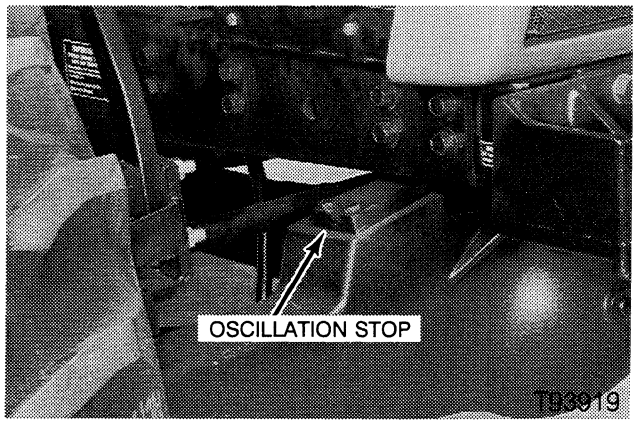


For 13.6-28 Tires Sizes Only

26L8

Oscillation Stop

Oscillation stops are required for some tire size and tread width combinations.The oscillation stops are installed on the axle stop pad on each side of the tractor.



Steering and Oscillation Stop Charts

The following charts show the steering stop turn angle and oscillation stop requirement for each tread width and tire size combination for tractors without fenders and with fenders.

TRACTORS EQUIPPED WITH 26 INCH (660 mm) DIAMETER WHEEL

STEERING STOP AND OSCILLATION STOP POSITIONS- **W/O FENDERS**								
TIRE SIZE	TYPE STOP	TREAD WIDTHS (INCHES)						
		62.1	66.5	71.3	75.8	79.1	83.5	88.3	92.8
18.4-26	A	N.A.	27	33	42	50	50	50	50
	B	N.A.	YES	YES	YES	YES	NO	NO	NO
16.9-26	A	24	33	44	50	50	50	50	50
	B	YES	YES	YES	YES	NO	NO	NO	NO
STEERING STOP AND OSCILLATION STOP POSITIONS- **WITH FENDERS**								
TIRE SIZE	TYPE STOP	TREAD WIDTHS (INCHES)						
		62.1	66.5	71.3	75.8	79.1	83.5	88.3	92.8
18.4-26	A	N.A.	N.A.	27	36	36	44	44	50
	B	N.A.	N.A.	YES	YES	YES	NO	NO	NO
16.9-26	A	24	27	27	36	36	44	44	50
	B	YES	YES	YES	YES	NO	NO	NO	NO

TRACTORS EQUIPPED WITH 28 INCH (711 mm)
AND 30 INCH (762 mm) DIAMETER WHEEL

STEERING STOP AND OSCILLATION STOP POSITIONS- **W/O FENDERS**								
TIRE SIZE	TYPE STOP	TREAD WIDTHS (INCHES)						
		60.1	64.5	69.3	73.8	81.1	85.5	90.3	94.8
13.6-28	A	29	40	45	50	50	50	50	50
	B	YES	YES	YES	NO	NO	NO	NO	NO
14.9-28	A	24	36	42	50	50	50	50	50
	B	YES	YES	YES	YES	NO	NO	NO	NO
16.9-28	A	18	27	36	42	50	50	50	50
	B	YES	YES	YES	YES	NO	NO	NO	NO
14.9-30	A	24	33	42	50	50	50	50	50
	B	YES	YES	YES	YES	NO	NO	NO	NO
STEERING STOP AND OSCILLATION STOP POSITIONS- **WITH FENDERS**								
TIRE SIZE	TYPE STOP	TREAD WIDTHS (INCHES)						
		60.1	64.5	69.3	73.8	81.1	85.5	90 3	94.8
13.6-28	A	23	23	29	29	40	45	50	50
	B	YES	YES	YES	NO	NO	NO	NO	NO
14.9-28	A	24	24	27	36	42	44	50	50
	B	YES	YES	YES	YES	NO	NO	NO	NO
16.9-28	A	18	24	27	36	42	44	50	50
	B	YES	YES	YES	YES	NO	NO	NO	NO
14.9-30	A	24	24	27	36	42	44	50	50
	B	YES	YES	YES	YES	NO	NO	NO	NO

Type Stop A = Steering Stop Angle Number Type Stop B = Oscillation Stop Required

NOTE: *N.A. indicates that the tread width is not approved for these tire sizes because of clearance requirements.*

TIRE SPECIFICATIONS

Front Tires - Two Wheel Drive

TIRE SIZE	TIRE RATING	TREAD TYPE	INFLATION PRESSURE
11.0-16	8 PLY	F2M	40 PSI (276 kPa)
11.0-16	12 PLY	F2M	60 PSI (414 kPa)
14L-16.1	6 PLY	F2M	28 PSI (193 kPa)
14L-16 1	10 PLY	F2M	44 PSI (303 kPa)
16.5L-16.1	8 PLY	F2M	32 PSI (221 kPa)

Front Tires - Mechanical Front Drive (MFD)

TIRE SIZE	TIRE RATING	TREAD TYPE	INFLATION PRESSURE
13.6-28	10 PLY	R1	36 PSI (248 kPa)
13.6R-28	3 STAR	R1	30 PSI (207 kPa)
14.9-28	6 PLY	R1	20 PSI (138 kPa)
14 9-28	10 PLY	R1	32 PSI (221 kPa)
14.9R-28	3 STAR	R1	30 PSI (207 kPa)
14.9-30	10 PLY	R1	32 PSI (221 kPa)
16.9-26	6 PLY	R1 & R2	18 PSI (124 kPa)
16.9-26	10 PLY	R1 & R2	28 PSI (193 kPa)
16.9R-26	2 STAR	R1	24 PSI (165 kPa)
16.9-28	6 PLY	R1	18 PSI (124 kPa)
16.9R-28	2 STAR	R1	24 PSI (165 kPa)
18.4-26	6 PLY	R1	16 PSI (110 kPa)
18.4-26	10 PLY	R2	26 PSI (179 kPa)
18.4R-26	2 STAR	R1	30 PSI (207 kPa)

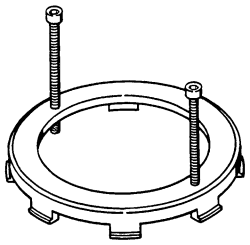
Rear Tires

TIRE SIZE	TIRE RATING	TREAD TYPE	INFLATION PRESSURE
16.9-38	8 PLY	R1	16 to 24 PSI (110 to 165 kPa)
18.4-38	8 PLY	R1 & R2	16 to 20 PSI (110 to 138 kPa)
18.4R-38	1 STAR	R1 & R2	16 to 18 PSI (110 to 124 kPa)
18.4-38	10 PLY	R1 & R2	16 to 26 PSI (110 to 179 kPa)
18.4-38	8 PLY	R1 & R2	12 to 16 PSI (83 to 110 kPa)
18.4-42	8 PLY	R1	16 to 20 PSI (110 to 138 kPa)
18.4-42	10 PLY	R1	16 to 26 PSI (110 to 179 kPa)
18.4R-42	2 STAR	R1	16 to 24 PSI (110 to 165 kPa)
20.8-38	8 PLY	R1 & R2	16 to 18 PSI (110 to 124 kPa)
20.8R-38	1 STAR	R1 & R2	16 to 18 PSI (110 to 124 kPa)
23.1-34	8 PLY	R1	16 PSI (110 kPa)
24.5R-32	1 STAR	R1	18 PSI (124 kPa)

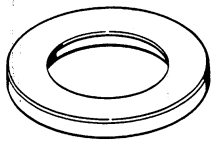
Do not remove, install or make repairs to a tire on a rim. Take the tire and rim to a tire shop where persons with special training and special safety tools are available. If the tire is not in correct position on the rim, or if too full of air, the tire bead can loosen on one side and cause air to leak at high speed and with large force. Because the air leak can thrust the tire in any direction, and with much force, you will be in danger of injury. M169A

SERVICE TOOLS INTRODUCED FOR 7100 SERIES
Transmission Service

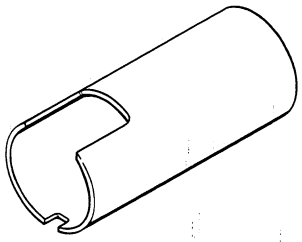
CAS-1903 CLUTCH SPRING COMPRESSOR TOOL SET INCLUDES CAS-1903-1-2-3-4-5
Used in Section 6005,6006



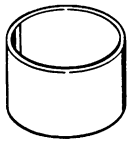
CAS-1903-1
COMPRESSOR PLATE WITH TWO CAPSCREWS AND SIX TANGS



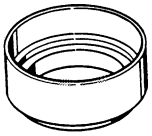
CAS-1903-2
COMPRESSOR PLATE



CAS-1903-3
COMPRESSOR SLEEVE WITH NOTCH

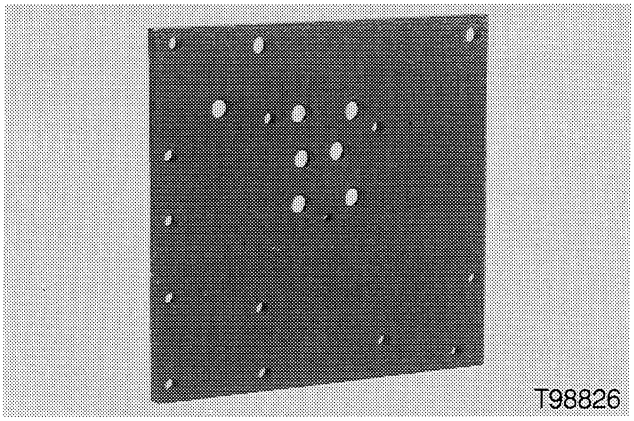


CAS-1903-4
CENTERING SLEEVE



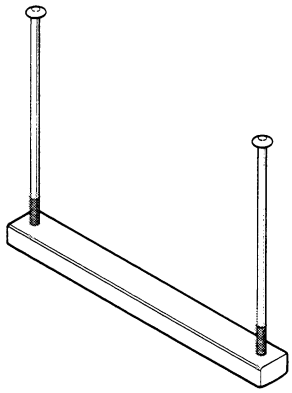
CAS-1903-5
COMPRESSOR SLEEVE

CAS-1908
TEST AND ALIGNMENT TOOL FOR MFD CLUTCH
Used in Section 6006

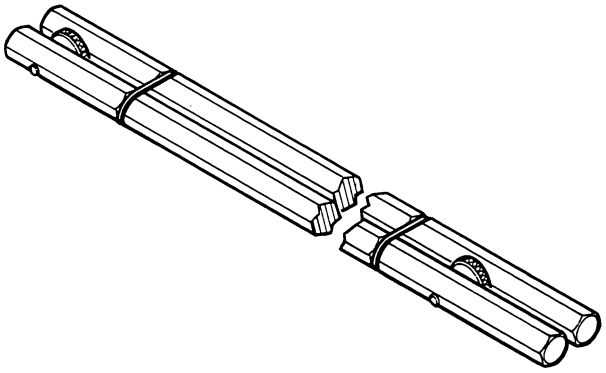


CAS-1905-1
TRANSMISSION CLUTCH LEAK TEST PLATE
Used in Section 6004,6005,6006

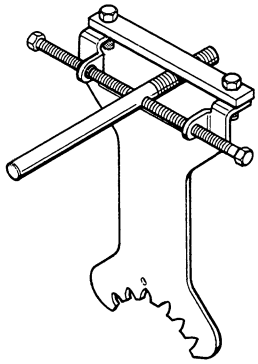
CAS-1902 REAR AXLE PINION SETTING TOOL SET - INCLUDES CAS 1902-1-2-3-5



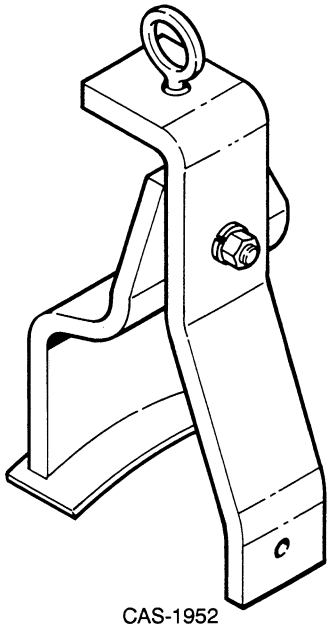
CAS-1902-1
BEVEL PINION SETTING TOOL
Used in Section 6008



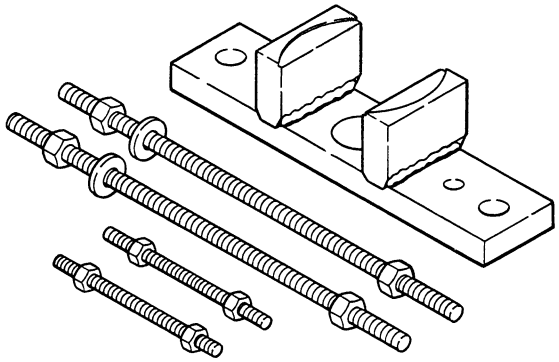
CAS-1902-2
ROLLING TORQUE ADAPTER
Used in Section 6008



CAS-1902-3 - (7130-7140)
CAS-1902-5 - (7110-7120)
SUN GEAR SHAFT ALIGNMENT TOOL
Used in Section 6009

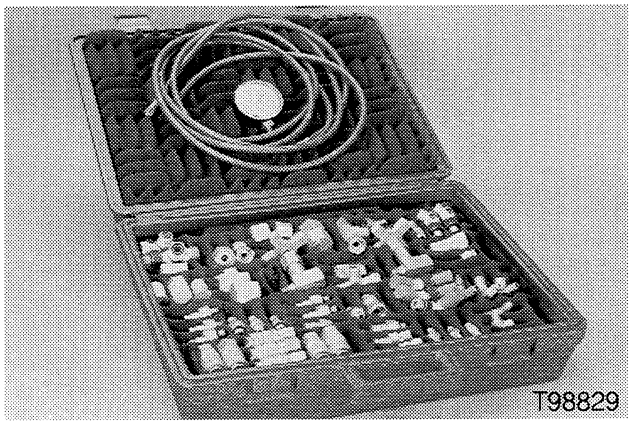


CAS-1952
REAR DIFFERENTIAL LIFTING TOOL
Used in Section 6008



CAS-1907
PTO CLUTCH SERVICE TOOL
Used in Section 6010

HYDRAULIC TEST FITINGS



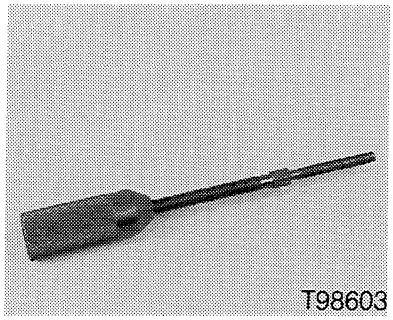
CAS-1904
TEST FITTING KIT
SUPPLEMENT FOR CAS-1803

CAS-1906
FLOWMETER FITTING KIT
SUPPLEMENT FOR CAS-1807

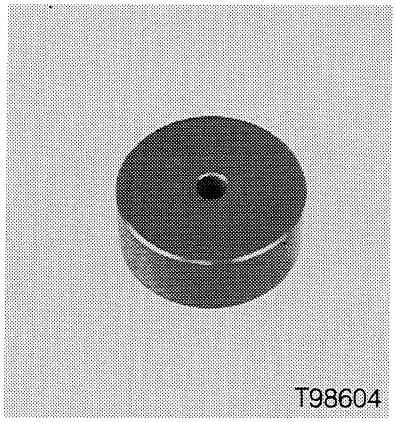
CAS-10851
VOLTAGE REGULATOR TESTER
Used in Section 4004

MFD AXLE SERVICE

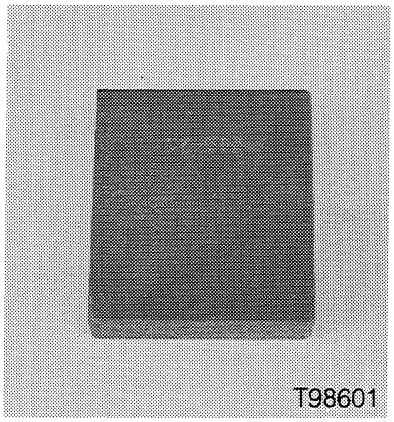
CAS-1898 Pinion Setting Tool Set - Includes CAS-1898 - 1, 3, 4, 6, 7, 8 and 9
Used in Section 6012



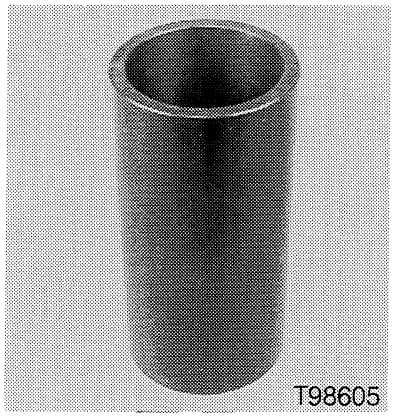
CAS-1898-1 HANDLE
CAS-1898-2 THREADED SHAFT



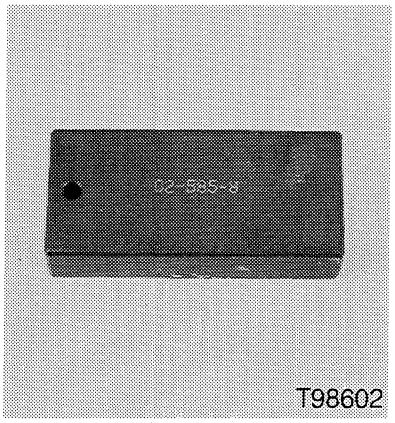
CAS-1898-3
GAUGE DISC



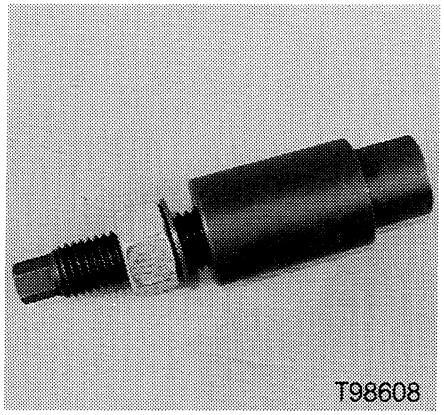
CAS-1898-4
GAUGE BLOCK



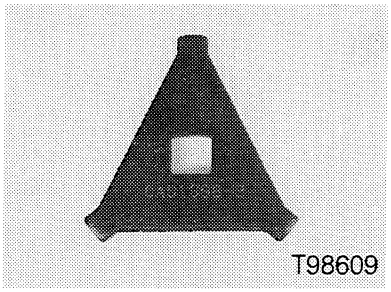
CAS-1898-6
TUBE FOR BEARING BORES



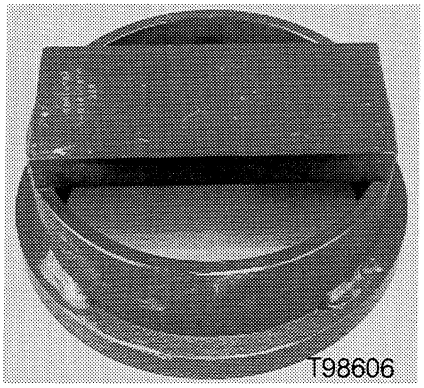
CAS-1898-7
CHECK BLOCK



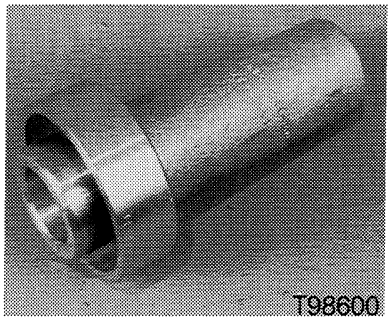
CAS-1898-8
COMPANION FLANGE INSTALLER



CAS-1898-9
SIDE BEARING ADJUSTING WRENCH



CAS-1900
PLANETARY HOUSING BEARING AND
SEAL DRIVER USED IN SECTION 6013



CAS-1899
PINION SEAL INSTALLER
Used in Section 6012

NOTE: The CASE CORPORATION reserves the right to make improvements in design or changes in specifications at any time without incurring any obligation to install them on units previously sold