

TA20 – ARTC Code of Practice for the Victorian Main Line Operations

Applicability

VIC

Publication Requirement

External Only

Document Status

Issue/Revision #	Effective from
1.2	07 August 2011.
2.0	04 October 2015
2.1	23 December 2020
2.2	03 July 2022
3.0	15 October 2023



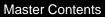
MASTER TABLE OF CONTENTS

Section 1 – General Rules		
Rule	Title	Page
1	TA20 - ARTC Code of Practice for Victorian Mainline Operations	1-3
2	How to find Information in The TA20 - ARTC Code of Practice for Victorian Mainline Operations.	1-4
3	General Rules	1-6
4	Safety of the Public	1-8
5	Issue of TA20 - ARTC Code of Practice for Victorian Mainline Operations and Other Notices	1-8
6	Reporting and Responding to a Condition Affecting the Network (CAN)	1-9
7	Condition Affecting the Network (CAN) Form	1-12
8	Network Communication	1-16
9	Spoken and Written Communication	1-20
Section	on 2 – Fixed Signals	
Rule	Title	Page
1	Fixed Signal Types	2-5
2	Fixed Signal Classifications	2-6
3	Two Position Signals: General	2-7
4	Multiple Signal Arms	2-10
5	Distant Signals	2-12
6	Disc Signal	2-13
7	Dwarf Signals	2-15
8	Point Indicators and Disc/Dwarf Signals	2-16
9	Three Position Signals: General	2-17
10	Three Position Home Signals	2-18
11	Three Position Automatic Signals	2-18
12	Three Position Home Signals Operating as Automatic Signals	2-19
13	Home and Automatic Signal Indications	2-22
14	Home Signals	2-30
15	Home Signals and Limited Train Movements	2-31
16	Train Stopped at a Home Signal with No Starting Signal	2-32
17	Use of Home and Distant Signals	2-32
18	Calling-On and Low Speed Signals	2-33
19	Starting Signals	2-37
20	Starting Signals Placed at 'Stop'	2-37
21	Hand Signals	2-38
22	Radio Signals	2-42
23	Signalling When Shunting Train or Trains Running in the Wrong Direction	2-45

Effective from: 15 October 2023



Section 3 – Detention at Fixed Signals		
Rule	Title	Page
1	Detention at Automatic Signals	3-2
2	Detention at Home or Starting Signal	3-5
Section	on 4 – Defective Fixed Signals	
Rule	Title	Page
1	Overview	4-3
2	Defective Signals and Points: General Instructions	4-3
3	Defective Fixed Signals	4-5
4	Disconnection of Track Circuiting During Trackwork Operations	4-14
5	Security of Interlocking	4-15
6	Failure of Signal Lights	4-15
Section	on 5 – Working of Points and Signals	
Rule	Title	Page
1	Testing of Fixed Signals and Wires	5-5
2	Fixed Signals and Pointwork	5-6
3	Catch Points	5-7
4	Reversing of Signals	5-7
5	Signals Not in Use	5-8
6	Lever Sleeves	5-9
7	Point Indicators	5-10
8	Point Detectors	5-11
9	Automatic Train Stops	5-11
10	Fixing, Removing, Altering or Repairing Signals or Apparatus for Working Points and Signals	5-14
11	Returning Working Points and Signals to Service	5-17
12	Certificate of Testing	5-18
Section	on 6 – Supervision of Signallers and Signalboxes	
(NOT	APPLICABLE ON ARTC VICTORIAN MAIN LINE OPERATIONS)	
Section	on 7 – Audible Track Warning Signals	
Rule	Title	Page
1	Audible Track Warning Signals	7-2





Section 8 – Control and Working of Stations		
Rule	Title	Page
1	Control and Working of Stations	8-3
2	Competency of Signallers	8-4
3	Vehicles Shunted into Siding	8-6
4	Yard Officials and Yard Supervisors	8-7
5	Repairs to Vehicles	8-8
6	Accidents or Obstructions	8-11
Section	on 9 – Working of Level Crossings	
Rule	Title	Page
Rule 1	Title Working of Level Crossings	Page 9-5
	1000	
1	Working of Level Crossings	9-5
1 2	Working of Level Crossings Defective Signalling at Level Crossings	9-5 9-10
1 2 3	Working of Level Crossings Defective Signalling at Level Crossings Working of Level Crossing Gates	9-5 9-10 9-11
1 2 3 4	Working of Level Crossings Defective Signalling at Level Crossings Working of Level Crossing Gates Heavy Loads Passing Over Level Crossings	9-5 9-10 9-11 9-13
1 2 3 4 5	Working of Level Crossings Defective Signalling at Level Crossings Working of Level Crossing Gates Heavy Loads Passing Over Level Crossings Trackside Boards	9-5 9-10 9-11 9-13 9-15
1 2 3 4 5 6	Working of Level Crossings Defective Signalling at Level Crossings Working of Level Crossing Gates Heavy Loads Passing Over Level Crossings Trackside Boards Level Crossings at which Tramway Traffic is Regulated by Fixed Signals	9-5 9-10 9-11 9-13 9-15 9-16
1 2 3 4 5 6 7	Working of Level Crossings Defective Signalling at Level Crossings Working of Level Crossing Gates Heavy Loads Passing Over Level Crossings Trackside Boards Level Crossings at which Tramway Traffic is Regulated by Fixed Signals Railway/Tramway Electrical Conductors	9-5 9-10 9-11 9-13 9-15 9-16 9-17
1 2 3 4 5 6 7 8	Working of Level Crossings Defective Signalling at Level Crossings Working of Level Crossing Gates Heavy Loads Passing Over Level Crossings Trackside Boards Level Crossings at which Tramway Traffic is Regulated by Fixed Signals Railway/Tramway Electrical Conductors Kooyong Operation of Tramway Square	9-5 9-10 9-11 9-13 9-15 9-16 9-17 9-21



Section 10 – Working of Trains			
Rule	Title	Page	
1	Train Whistle	10-6	
2	Drivers' Duty	10-7	
3	Drivers' Responsibilities	10-8	
4	Unscheduled Stop	10-9	
5	Train Controller's Duties for Train Overtime in Section where all Communication has Failed	10-10	
6	Driver Leaving Cab	10-11	
7	Drivers to Read Notices	10-12	
8	Operation on Authorised Lines	10-12	
9	Competent Employee to Assist Driver on Locomotive	10-13	
10	Approaching Signals	10-13	
11	Train Speeds	10-14	
12	Train Assisted by a Locomotive	10-14	
13	Driver Control of Start and Stop	10-15	
14	Departure of Passenger Trains	10-16	
15	Passenger Trains	10-16	
16	Suburban Passenger Trains	10-16	
17	Competent Employees to Monitor Departure of Train	10-16	
18	Driver's Responsibilities at Departure	10-16	
19	Train Stopped Out of Routine	10-17	
20	Stopping Short or Overunning Platforms	10-17	
21	Green Hand Signals	10-19	
22	Train not to Stand Foul of Points	10-19	
23	Driver Responsible for Train	10-19	
24	Driver to Assist in Formation of Train	10-19	
25	Attendance of Competent Employees	10-20	
26	Items to be Carried by Competent Employees	10-20	
27	Competent Employee's Duties	10-21	
28	Stationmaster in Charge of Driver and Competent Employee	10-21	
29	Information Regarding Running of Trains	10-22	
30	Train Tail Signal Indicating Train is Complete	10-22	
31	Entering Driver's Compartment	10-23	
32	Propelling Trains on Running Lines	10-23	
33	Duties of Employees when Pushing Vehicles	10-24	
34	Propelling Trains from a Terminal Station	10-25	
35	Trains to be Shunted within the Home Signal	10-25	
36	Train to be Clear of the Running Line	10-26	
37	Securing Loads	10-26	
38	Reporting of Irregularities and Faults	10-27	
39	Driver's Defect Reports	10-28	
Section	Section 10 – Working of Trains is continued on the next page.		



Section 10 – Working of Trains		
Rule	Title	Page
40	Driver's Special Reports	10-28
41	Complaint Concerning Running of Carriage	10-29
42	Signaller or Station Staff not Available	10-29
43	Departure of Freight Trains	10-29
44	Running Line Clear	10-30
45	Pushing Trains - Control of Air Brake	10-31
Section	on 11 – Train Signals	
Rule	Title	Page
1	Train Lights	11-2
2	Tail Signals	11-3
3	Headlight and ETM	11-4
4	Double Lines	11-7
5	Single Lines	11-8
Section	on 12 – Shunting	
Rule	Title	Page
1	Shunting Operations	12-4
2	Duties of Drivers, Signallers and Competent Employees During Shunting	12-4
3	Shunting Controlled by Hand Signals	12-6
4	Shunting Movements Controlled by Radio	12-6
5	Shunting Safely	12-7
6	Smooth Shunting Operations	12-7
7	Loose Shunting	12-9
8	Air Brake	12-9
9	Shunting of Train Types	12-9
10	Safety and Working with Shunted Vehicles	12-10
11		
	Fixed Signal Controlled by a Track Circuit	12-11
12	Fixed Signal Controlled by a Track Circuit Shunting at Interlocked Stations	12-11 12-12
12 13		
	Shunting at Interlocked Stations	12-12
13	Shunting at Interlocked Stations Vehicles Left Standing on Running Line	12-12 12-13
13 14	Shunting at Interlocked Stations Vehicles Left Standing on Running Line Shunting on Inclines	12-12 12-13 12-14



Section 13 – Trains Stopped by Accident/Obstruction		
Rule	Title	Page
1	Trains Stopped by Accident, Failure, Obstruction or from any Cause	13-3
2	Protection for more than One Line	13-5
3	Locomotive Runs Forward	13-7
4	Relief Train to Assist Disabled Train	13-7
5	Train to Return on Wrong Line to Rear	13-14
6	Accident or Failure to Portion of Train	13-17
7	Employees to Observe Passing Trains	13-18
8	Vehicle on Fire	13-23

Section 14 - Single Line Working Rule Title **Page** Working the Traffic of a Double Line Over a Single Line during Repairs or 14-3 Obstruction Cross-Over Road 14-6 Institution of Single Line Working 14-7 14-8 Double Line Block System Fixed Signals - Single Line Working 14-9 Trains Working Over Single Line 14-10 Facing Points 14-11 Shifts Changing while Single Line Working is Operational 14-11 14-12 Ordinary Working to be Resumed 10 Single Line Working Forms 14-13 Use of Train Register Books 14-13 11 14-14 12 Disabled Train Accompanied by Pilot Disabled Train Unaccompanied by Pilot 14-17 13

Working of Level Crossings with Flashing Lights/Boom Barriers

Effective from: 15 October 2023

14-20



Section 15 – Infrastructure Works		
Rule	Title	Page
1	Definitions	15-7
2	Activity of Trolleys	15-7
3	Track Force Protection - Country Regions	15-8
4	Track Force Protection - Suburban Area	15-16
5	Obstruction of the Line Special Circumstance	15-19
6	Track Force Protection - Inner Suburban Area Only	15-19
7	Reflective Signs during Prolonged Periods of Reduced Speeds	15-22
8	'Absolute Occupation' of a Running Line	15-26
9	Protection of an Area Under `Absolute Occupation'	15-30
10	Employees Worker on the Infrastructure Department	15-31
11	Duties of Site Supervisor Gangers	15-32
12	Inclement Weather and Natural Disasters	15-33
13	Removal of Livestock	15-33
14	Maintaining a Clear Line	15-34
15	Actions by Employees Workers on the Approach of a Train	15-34
16	Securing the Permanent Way	15-36
17	Reduction in Train Speed due to Track Works	15-36
18	Absolute Occupation of a Running Line	15-37
19	Absolute Occupation/Power Off Conditions Protection of Work Sites	15-38
20	Absolute Occupation / Local Possession Authority - Multiple Work Groups	15-44
21	Track Warrant Working	15-55
22	'Booking Out' Procedures for Track	15-71
23	Infrastructure Booking Advice (IBA)	15-74
24	Lookout Working	15-77
25	Absolute Signal Blocking	15-82
Section 16 – Automatic and Track Control System		

(NOT APPLICABLE ON ARTC VICTORIAN MAIN LINE OPERATIONS)



Section 17 – Centralised Traffic Control System		
Rule	Title	Page
1	Object of the System	17-3
2	Definitions	17-3
3	Fixed Signals	17-4
4	Points at Crossing Loops	17-5
5	Telephone and Telephone Cabins	17-5
6	Blocking Commands	17-5
7	Failure of Signals	17-5
8	Emergency Automatic Mode	17-10
9	Emergency Control Panels	17-12
10	Switching in a Station for Local Operation	17-12
11	Train an Unusually Long Time in Section	17-13
12	Shunting Outside Home Departure Signal for Local Movements	17-13
13	Failure of Grade Crossing Pilot Lever	17-14
14	Section Obstructed by Accident or Disabled Train	17-15
15	Working of Trains to and from Obstruction in Section	17-16
16	Train not to Return to Loop in Rear except as Authorised	17-18
17	Trains Crossing at Unattended Stations	17-18



Section 18 – Train Order System		
Rule	Title	Page
1	Instructions	18-5
2	Definitions	18-6
3	Types of Train Orders	18-7
4	Corridors / Block Point Location	18-7
5	Object of the System	18-8
6	Train Order Territory	18-9
7	Fixed Signals at Terminal and Attended Crossing Stations	18-13
8	Failure of Home Signals in Train Order Territory	18-13
9	Working of Fixed Signals when Trains are to Cross	18-14
10	Working of Fixed Signals when Trains are to Shunt at Attended Crossing Stations	18-14
11	Working of Fixed Signals at certain Locations	18-14
12	Issue of Train Orders	18-14
13	Issue and transmission of Train Orders	18-15
14	Receipt and repeating Back of Train Orders	18-16
15	Verification of Train Orders	18-17
16	Understanding of Train Orders	18-17
17	Driver's Train Order Book	18-18
18	Train Order to remain in Force	18-18
19	Incorrect preparation of Train Order	18-18
20	Signallers changing over at Attended Crossing Stations	18-18
21	Train Network Controllers Changing Over	18-19
22	Drivers Changing Over	18-19
23	Change of Leading Locomotive	18-19
24	Fulfilled Train Orders	18-20
25	Procedure for Cancelling Train Orders by the Train Network Controller	18-20
26	Arrival of Trains at Crossing Stations/ Loops and Block Points	18-22
27	Crossing/Passing of Trains	18-22
28	Intermediate Sidings	18-23
29	Locking Away at an Intermediate Master Key Locked Siding	18-24
30	Fouling the Single Line for Local Movements	18-25
31	Total Failure of Train Radio	18-27
32	Train Disabled	18-29
33	Obstruction	18-30
34	Total Obstruction	18-31
35	Track Maintenance Machines and Vehicles	18-33
36	Security of Master Keys on Locomotives	18-33
37	Master Keys	18-34



Section 19 – Section Authority System	
(NOT APPLICABLE ON ARTC VICTORIAN MAIN LINE OPERATIONS)	
Section 20 – Double Line Block System	
(NOT APPLICABLE ON ARTC VICTORIAN MAIN LINE OPERATIONS)	
Section 21 – Train Staff and Ticket System	
(NOT APPLICABLE ON ARTC VICTORIAN MAIN LINE OPERATIONS)	
Section 22 – Electric Staff System	
(NOT APPLICABLE ON ARTC VICTORIAN MAIN LINE OPERATIONS)	
(NOT ALL ELOADED ON ALL VIOLOGIA WALL OF ELACTIONS)	
Section 23 – Intermediate Electric Staff System	
(NOT APPLICABLE ON ARTC VICTORIAN MAIN LINE OPERATIONS)	
Section 24 – Automatic Electric Staff Working	
(NOT APPLICABLE ON ARTC VICTORIAN MAIN LINE OPERATIONS)	
Section 25 – Issue of Train Authorities	
Rule Title	Page
1 Definitions	25-2
2 Train Authority Working	25-2
3 Completing the Train Authority	25-3
4 Cancelling Train Authorities due to Errors or Changes of Text	25-7
5 Section Obstructed by Disabled Train	25-8
6 Train Accident Causing an Obstruction	25-10
Continue 20. Operation Procedures Constraints of Circumstance and Circumstance	
Section 26 – Operating Procedures Supervision of Signallers and Signalboxes	
(NOT APPLICABLE ON ARTC VICTORIAN MAIN LINE OPERATIONS)	



Section 27 – Operating Procedures Working of Points and Signals		
Rule	Title	Page
1	Colours of Levers in Signalboxes	27-6
2	Equipment at Interlocked Signalboxes	27-14
3	Point Indicators	27-15
4	Testing, Cleaning and Adjusting Equipment at Intersection of Railway and Tramway Equipment	27-15
5	Point Detectors	27-16
6	Cleaning and Graphiting Points	27-17
7	Defective Signal Repeater (Mechanical Signals)	27-18
8	Release of Point Lever Controlling Motor Operated Points or A Lever Electrically Locked by a Track Section	27-18
9	Electrical Control of Signals at Stations and Junctions. Electrical Route-Locking	27-20
10	Electrical Control of Signals at Stations and Junctions. Approach Locking	27-21
11	Track-Locked Signals	27-24
12	5P Key Switches at Stations	27-25
13	Trailable Points at Unattended Crossing Station/Loops	27-27
14	Disconnection of Main Line Trailable Points	27-32
15	Plunger Locked Facing Points at Non-Interlocked Crossing and Terminal Stations on Single Lines	27-34
16	Instructions for Manual Operation of Electro-Hydraulic Point Machine	27-39
17	Dual Control Point Machines	27-42
18	Working of Sidings Controlled by Staff/Annett/Master Key Locks	27-44
19	Defective Point Locking	27-53
20	Lost or Damaged Master Key	27-54
21	Movements of Master Keys	27-57
22	Staff Annett Key Exchange Apparatus	27-57
23	Electric Switch Locks - Intermediate Sidings	27-59
24	Failure of Electric Switch Lock	27-64
25	Telephone and Telephone Cabins	27-65
26	Electronic End of Train Detection	27-65
27	Bi-Directional Electronic End of Train Detection	27-68
28	Double Wire Control of Points in Main Line and Home Signals at Single Line Crossing Stations	27-68
29	Crossing Trains at Stations not Provided with Fixed Signals	27-72
30	Procedure for Carrying out Maintenance on Staff, Annett or Master Key Locked Points at Intermediate Sidings, Stations and Loops where there is No Employee in Charge.	27-75
31	Driver Initiated Control Equipment	27-77
32	Route Indicators	27-82
33	Hand Operated Flag Derail	27-84



Section 28 – Operating Procedures Control and Working of Stations				
Rule	Title	Page		
1	Single Line Crossing Stations-Numbers 1 and 2 Tracks	28-2		
2	Delivery of Staff to Drivers	28-2		
3	Audible Warning and Locking Devices	28-2		

Section 29 - Operating Procedures Working of Trains Rule **Title Page** 1 Whistling Signals 29-5 2 Marker Lights of Electric Trains 29-7 3 Emergency Tail Lighting 29-7 4 Employees Riding on Trains 29-10 5 Driver Changeover and Trains Ready 29-10 6 Derailments 29-11 7 Train Defects 29-12 8 Train Preparation and Repairs at Flinders Street and Epping 29-13 Repairing Buffer Stops 29-14 Marshalling of Flammable or Dangerous Goods during Shunting 29-14 10 11 Safety Vehicle with Articles of Exceptional Length 29-15 12 Transition Coupling 29-15 13 Combined Trains 29-16 14 Working at Pantographs - Equipment Examiners 29-20 15 Coupler Height 29-22 16 Lashings and Tarpaulins 29-23 17 Turned Brake Heads on COMENG Trains 29-24 18 Rail Motors 29-25 19 Operation of Steam-Hauled Passenger Trains 29-27 20 Locked or Jammed Wheels 29-31 21 Headlight Failure - Locomotive Hauled Trains and Sprinters 29-35 22 Procedures for Hauling Bluebird Rail Cars 29-37 23 The E.T.A.S (End of Train Air System) 29-38



Rule	Title	Pag
1	Definitions	30-8
2	General Instructions	30-9
3	Use and Operation of Road/Rail and Track Vehicles	30-1
4	Train Information and Permission Book	30-1
5	Responsibilities of Employee Worker in Charge	30-1
6	Responsibilities of Signallers and Train Network Controllers	30-1
7	Instructions for Granting Permission to use On-Track Vehicles	30-1
8	Entries in Train Register Book	30-1
9	Electric and Train Staff Sections	30-2
10	Prohibited Entry of Train	30-2
11	Failure of Communication	30-2
12	Train Network Controller as Signaller	30-2
13	Train Information when Permission not Obtainable	30-2
14	Operation of Track Machines in Track Circuited Areas	30-2
15	Instructions to Ensure the Safe Passage of Machines	30-2
16	Ballast and Plant Trains	30-2
17	Mechanised Track Maintenance Operations	30-2
18	Protection of Track Maintenance Machines	30-3
19	Stabling of On-Track Maintenance Machines at Master Key Locked Sidings	30-3
20	On-Track Maintenance Machines Departing the Locked Siding	30-3
21	On-Track Maintenance Machines Stabling at the Locked Sidings	30-3
22	Machines/Vehicles Working From 'Off-Track' Stands	30-3
23	Boom Barriers and Flashing Light Signals - Single Line Working	30-3
24	Track Machines/Vehicles in Train Order Territory	30-3
25	Track Machines/Vehicles in Convoy	30-3
26	Deleted	30-3
27	Operation of Road/Rail Vehicles - Suburban Area	30-3
28	Rail Flaw Detector Car & Road/Rail Vehicle in Convoy	30-3
29	Infrastructure Maintenance Machines and Road Rail Vehicles Operation of Fixed Signals	30-4
30	Speed Restrictions During Hot Weather	30-4
31	Using Infrastructure Booking Advices	30-5
32	Infrastructure Booking Advice (IBA) Form	30-5
33	Using Lookouts	30-6
34	Using Absolute Signal Blocking	30-6
35	Using Track Force Protection by setting signals at STOP	30-6

(NOT APPLICABLE ON ARTC VICTORIAN MAIN LINE OPERATIONS)

Section 31 – Operating Procedures Train Control System



Section 32 - Block Working Instructions

(NOT APPLICABLE ON ARTC VICTORIAN MAIN LINE OPERATIONS)

Section 33 – Operating Procedures	SOverhead and Electrical Equipment

Rule	Title	Page		
1	Overhead Equipment	33-2		
2	Switches	33-2		
3	Switching Arrangements	33-3		
4	Procedure to Book Out the Overhead Traction Power	33-4		
5	Prompt Reporting of Faults	33-7		
6	Warning Notices in Public Sidings	33-7		
7	Permit to Work	33-7		
8	Persons not to go on roof of Carriages	33-8		
9	1500 Volt Return Current	33-8		
10	Electric Trains	33-8		
11	Pantograph Overrunning Overhead Wire	33-9		

Section 34 - Operating procedures specified locations

(NOT APPLICABLE ON ARTC VICTORIAN MAIN LINE OPERATIONS)